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WARTIME ECONOMIC PLANNING  
IN AGRICULTURE

*A Study in the Allocation of Resources*

BY  
BELA GOLD



# WARTIME ECONOMIC PLANNING IN AGRICULTURE

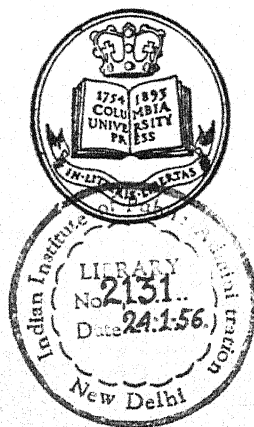
*A Study in the Allocation of Resources*

BY

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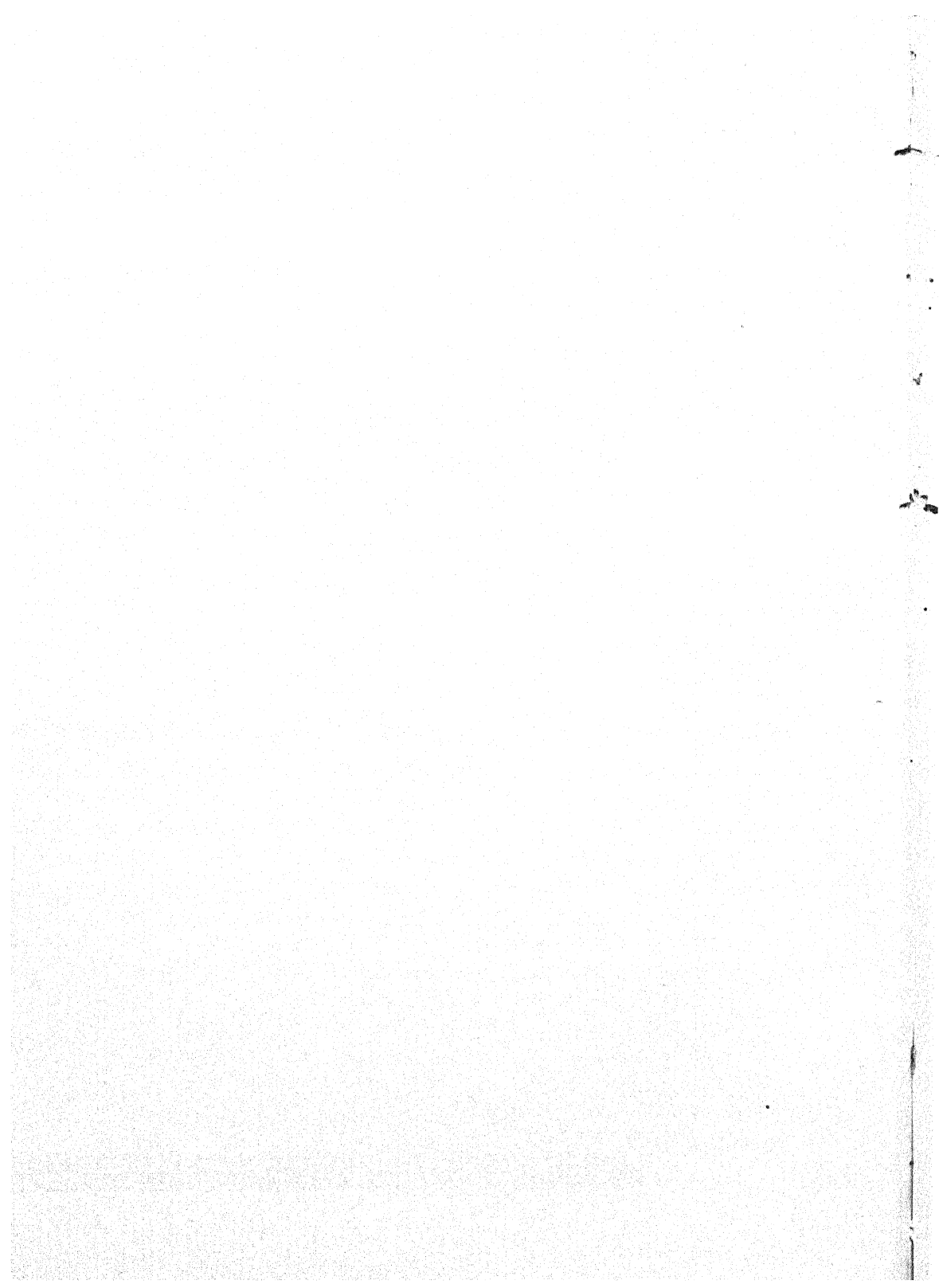
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*To Edes and Young Bob*



## PREFACE

UNFORTUNATELY, not even at this late date can the serious food problems discussed in this study be dismissed as a closed chapter in war and early post-war history. Shortages rooted in wartime developments remain a continuing source of economic dislocations, political instability and human want. Indeed, there was little cause for astonishment in the finding of the United Nations' department of economic affairs, as reported in the *New York Times* for February 5, 1948, that shortages of food were "the world's number one economic problem." Six months later, *The New Statesman and Nation* for August 7 warned that food stringencies represent a problem transcending in importance those reflected in more spectacular current news headlines, and added that:

. . . the pressure of hunger breeds restlessness and discontent, manifest throughout the world today. Those are the greater realities. They are with us in the continuing threat of famine, in a world not yet brought back to pre-war levels of food production, with 100,000,000 more mouths to feed. They press upon us increasingly year after year. . . . Everywhere, east and west of the Iron Curtain, the need to cope with the food problem is insistent.

As a crisis foreseen with uncommon accuracy long before its advent, the prospect of serious post-war food shortages posed a problem in the planning of resources allocations which was an organic component of the overall wartime strategy. Subsequent events have made it apparent, however, that achievements in the agricultural sector of strategic undertakings somehow fell substantially short of those attending the military program. Why?

The significance of an inquiry into the factors responsible for shortcomings in agricultural mobilization derives in part from the light it may throw on the inadequacies and errors of specific wartime policies concerned with the management of agricultural resources, and in part from its highlighting of weaknesses and failures in the planning techniques and principles employed. Moreover, such a detailed study of the frustration of officially-formulated and avowedly urgent national objectives may also offer some insights into the chronic problems generated by conflicts of group interests, the susceptibility of governmental agencies to pressure, and the difficulties involved in the exercise of effective leadership in a democracy.

In finally closing the books on what often seemed an interminable undertaking, it is a genuine pleasure to acknowledge, however inadequately, at least part of the indebtedness due to the friends and associates who have helped to shape not only the particular content of this study, but the writer's broader thinking as well.

During the early period of research, helpful co-operation and encouragement were extended by Mr. Roy F. Hendrickson, then Director of the Food Distribution Administration, by Dr. John M. Cassels, then Director of the Food Requirements and Allocations Control, by Mr. Paul H. Appleby, then Under-Secretary of Agriculture, by Dr. Courtney C. Brown, then Vice President of the Commodity Credit Corporation, by Mr. Morris Rosenthal, then Assistant Director of the Board of Economic Warfare, by Dr. Russell M. Wilder, then Chief of the Civilian Requirements Branch in the Food Distribution Administration and on leave from the Mayo Clinic, by Mr. James D. LeCron, then Director of the Food Supply Division in the Office of the Co-ordinator of Inter-American Affairs, and especially by Dr. Howard R. Tolley, then Chief of the Bureau of Agricultural Economics, and by Senator Harley M. Kilgore of West Virginia, then Chairman of the Sub-committee on War Mobilization of the United States Senate's Military Affairs Committee.

For help in assembling the voluminous materials required, the author wishes to thank Miss Joan Pascal, of the staff of the Senate Sub-committee on War Mobilization, and Mr. Harold Koppersmith, then doing graduate work at Columbia University, and to acknowledge a particularly heavy debt to Mr. Herman L. Myers, later Littauer Fellow at Harvard University.

In addition, the writer wishes to express his warm appreciation of the detailed criticisms and penetrating insights offered in the course of reviewing preliminary drafts of the manuscript by Dr. Harold B. Rowe of the Brookings Institution and by Dr. N. G. Silvermaster, then Director of the Labor Division in the Farm Security Administration. Helpful comments on the manuscript were also provided by Professor Carl Shoup of Columbia University and Dr. J. P. Watson of the University of Pittsburgh. And to Professor J. M. Clark of Columbia University, the author owes not only the gratitude engendered by a patient, thoughtful and always sympathetic examination of a rough and bulky manuscript, but also the deep respect of a student for a sensitive and suggestive teacher.

Broad intellectual debts are also gladly acknowledged to Professors David B. Porter and Joseph W. Roe of New York University, and particularly to the stimulating research and teaching of Professor Frederick C. Mills of Columbia University.

Above all, the writer owes to Professor Robert S. Lynd of Columbia University a debt greater than can be caught up here in words—as long-time teacher and friend, as an editor with hob-nailed boots, and as a social scientist in the forefront of efforts to bring social research closer to the tumultuous realities of current living.

BELA GOLD

UNIVERSITY OF PITTSBURGH  
JANUARY 15, 1949





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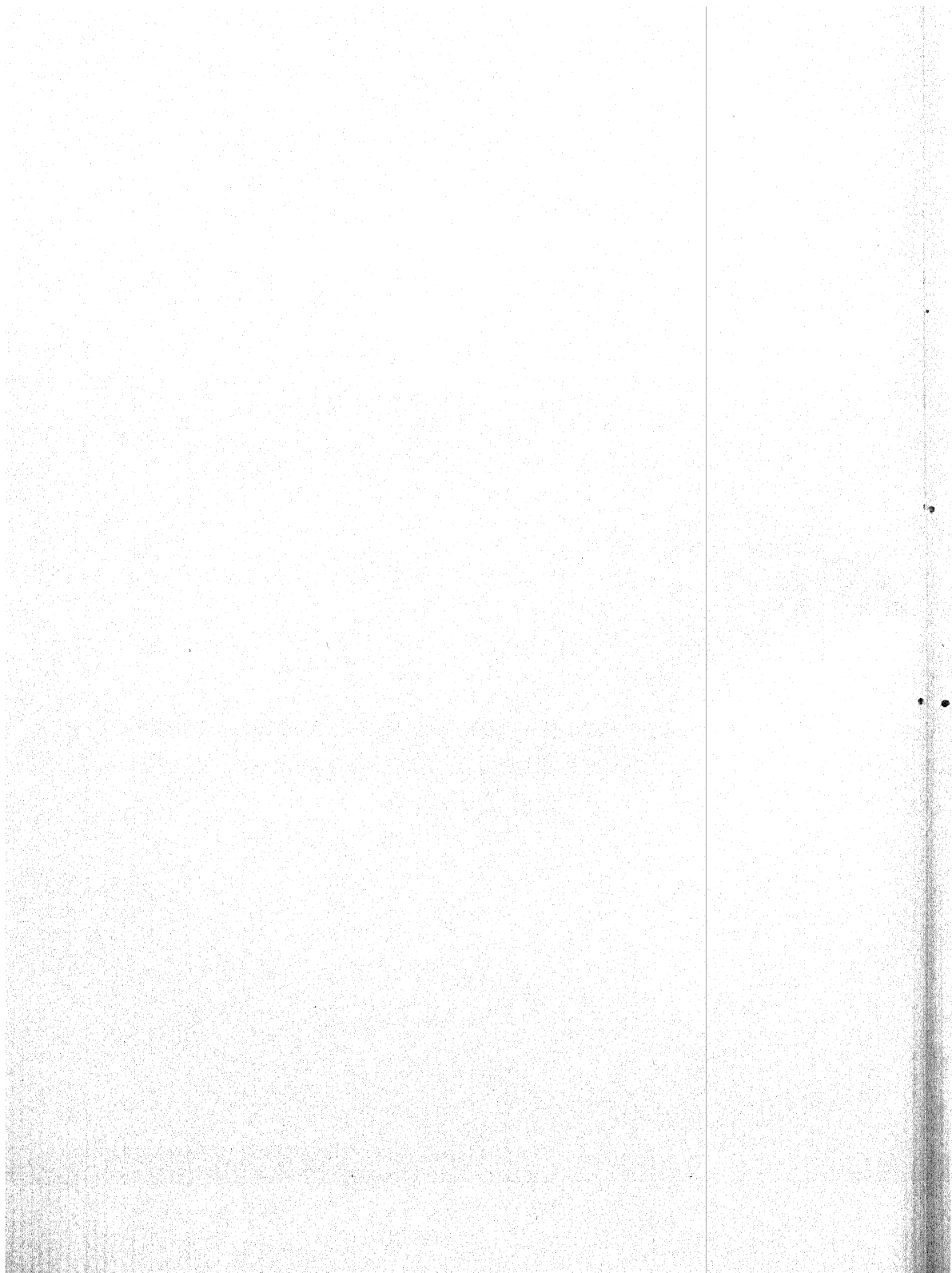
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## **PART A**

### **STRATEGIC TASKS OF AGRICULTURAL MOBILIZATION**



## CHAPTER I

# THE WARTIME CHALLENGE TO ECONOMIC PLANNING

THIS is a study of national economic planning in action. It is concerned with the problems of increasing the effectiveness with which available resources are applied to the task of maximizing the nation's output of needed goods and services. The analysis is focussed on the wartime mobilization of agriculture—one of the most systematic attempts at governmental planning in American history—but the issues and principles dealt with have wider relevance to the development of policies and methods for promoting the nation's future economic progress.

Instead of seeking to evaluate theories of national planning, this study concentrates on an intensive examination of the operational dynamics of planning actually under way. Close attention is given to such concrete tasks confronting responsible administrators as the following: the translation of broadly generalized objectives into specific performance goals; the development of long-range strategic policies, as well as those to be applied during early and successive intermediate stages of the undertaking; the definition of measures for gauging the rate of advance toward avowed ends; the organization of administrative machinery to execute proposed measures; the balancing of economic desiderata against the inescapable pressure for political expediency, and of far-reaching intentions against the realities of administrative deficiencies; and the resolution of conflicting compulsions to consider each issue within its complex setting of related problems and pressures, or to take advantage of the comparative simplicity, speed and flexibility of decision made possible by dealing with particularly urgent or vexatious problems in temporary isolation from such cumbrous entanglements. But the major emphasis will be placed on evaluating the apparent achievements and shortcomings of agricultural mobilization, and on probing for the factors which seem to have contributed most to observed results.

Such detailed analysis of the interaction of needs, plans and performance may prove of some interest in connection with efforts to increase the efficiency of economic planning as an instrument of government policy; and it may also help to clarify the severe limitations placed on the potential usefulness of this instrument, however effective its internal workings, by the clarity of purpose and by the vigor and political strength of the authorities ultimately responsible for the manner of its employment. It is hoped, in addition, that the findings may stimulate more intensive efforts

to bridge the considerable void between the abstract speculation about planning in general which still characterizes much of the work of scholars in this area, and the laborious and practical but largely vision-less process which often stands for planning in government workshops.

### I. THE WARTIME TASKS OF AGRICULTURE

Although food could hardly be expected to "win the war and write the peace," as was suggested by officially sponsored slogans, its role in the attainment of fundamental war objectives was a most important one. Adequate food supplies were essential to the provisioning of the Allied armed forces, to the maintenance of the greatest possible levels of industrial production in support of combat requirements, to alleviating the effects of losses of agricultural resources by our invaded allies, to the immediate easing of hunger in newly-liberated areas so as to minimize attendant burdens on the advancing armies, to the pacification of conquered peoples, and, finally, to the rehabilitation of war-torn economies. Thus, the effective disposition of food resources in time and space is so critical an element in modern war as to render imperative the development of a "food strategy" comparable in its scope, realism and thoroughness with the military strategy which it must parallel and with which it must be integrated.

The general tasks involved in mobilizing the nation's economy were: first, to maximize each sector's fulfillment of requirements for those among its products which were now deemed most essential; and, second, to minimize each sector's avoidable demands on the common stock of scarce resources, both through curtailing the output of inessentials and through increasing the efficiency with which available resources were utilized in needed production. Planning for such ends required a complicated system of undertakings: the forward estimation of requirements by product categories; the re-allocation of productive resources among alternative uses so as to accord with the projected output pattern; the vigorous development of resource-conserving methods; the alteration of consumption patterns to reinforce production and allocation objectives; and the restructuring of our intricate network of price differentials, in order to minimize the need for costly direct controls by aligning economic incentives as closely as possible with desired production adjustments. The execution of these complex tasks was rendered even more formidable by the emergency pressure for haste, by the necessity to gain popular support of proposed measures, by the need to maintain enough fluidity in the entire process to permit such rapid changes as might be dictated by the

course of the war, and, also, by the requirement for effecting reasonable co-ordination between American programs and those of co-operating nations.

Directed toward full realization of the potential contributions of food to the attainment of our basic war objectives, agricultural mobilization involved a network of tasks derived from and closely paralleling those confronting other major segments of the economy. The specific nature of wartime food management tasks will be discussed in detail in succeeding chapters. Some helpful background may be provided, however, by briefly reviewing the following five distinctive features of the setting within which the mobilization of agriculture was undertaken: (1) pre-war influences; (2) 1940 expectations; (3) post-war fears; (4) the special burdens placed on planning by the lengthy period of the agricultural production cycle; and (5) the timing of peak food requirements within the sequence of mobilization crises.

(1) A number of the agronomic, organizational and political issues which beset efforts to mobilize agriculture during the early years of the war were molded to so extraordinary an extent by our heritage of pre-war governmental measures that even the urgencies of war requirements were not infrequently overshadowed as a guiding consideration by these seemingly more remote factors. During the period 1933-40, after its long siege of economic adversity, agriculture had been subjected to an unprecedentedly far-reaching program of governmental controls. The resulting gains in soil fertility, the accumulation of "ever-normal granary" reserves, and the enhanced security, economic resources and productivity of our farmers were enormous assets to a nation faced with the need for precipitate mobilization. Moreover, the extensive organizational apparatus that had been created to enable farmers to participate in the formulation and administration of agricultural policies provided an invaluable means for strengthening war mobilization by enlisting the full vigor of democratic participation at the grass-roots.

On the other hand, some of the principles associated with pre-war policies proved less serviceable as guides to wartime accomplishment. For example, the disproportionate emphasis prior to the war on the internal development and co-ordination of agricultural policies had far outweighed considerations of their integration with other national economic policies; and, as a result, relatively few farm leaders and agricultural officials were disposed in late 1941 to surrender the "autonomy" of agriculture and to accept in its place a probably less advantageous subordination to centralized wartime controls over manpower and other resources

as well as prices. Similarly, by maintaining the relative positions in total agricultural production of the commodities that had been dominant historically (and, as a result, politically), and by stressing the parity concept of distributing returns in proportion to production costs instead of in accordance with relative consumption needs, the pre-war programs had served to reinforce natural inertias with the moral justification and financial support of official government policies—thereby forming an obstacle to crop conversion that largely withstood even the exigencies of war. Perhaps most serious of all, the farm programs had for so long concentrated on restricting production that, despite frequent reminders that the real goal was still “adjustment,” many national as well as local officials came in time to develop a deep-rooted attitudinal set with all of its resources firmly positioned to repel the threat of surpluses.

Thus, although the carry-overs from peacetime agricultural policies undoubtedly contributed heavily to the raising of mobilization potentials, it should be recognized that the momentum of earlier attitudes and relationships also served to hinder wartime efforts to increase food production substantially above earlier levels, to plow back some of the recent soil conservation gains into the war effort, to shift available land and other agricultural resources to the production of those foodstuffs which would contribute most to the fulfillment of essential wartime requirements, and to achieve sound economic stabilization objectives.

(2) In the case of agriculture, 1940, the year following the outbreak of war in Europe, brought developments which tended to revive rather than dispel lingering economic fears. The pessimistic outlook, reinforced by the immediate impact of overseas hostilities on agricultural exports from this country, was later summarized as follows by Secretary of Agriculture Claude R. Wickard:

In the United States we had surpluses of cotton, wheat, corn, and tobacco with small chance to export them. There were few shortages of any agricultural products. In the first 12 months of the war our exports of tobaccos, fruits and grains were in each instance about 30 per cent less than in the preceding 12 months. Exports of pork were about 40 per cent below 10-year average. Exports of raw cotton and linters dropped sharply in 1940.

Our own defense program had barely started; there was still considerable unemployment in the United States. In this setting the forecast was for a smaller rather than a larger demand for agricultural products, and from a production standpoint agriculture prepared to mark time.<sup>1</sup>

<sup>1</sup> *Report of the Secretary of Agriculture, 1941*, U. S. Government Printing Office, 1941, p. 2. For a fuller analysis of the outlook during the fall of 1940, see *Report of the Secretary of Agriculture, 1940*, U. S. Government Printing Office, 1940, pp. 2-3.

As a result, much work went into the development of a rural works program to relieve unemployment in farm areas; and the past emphasis on production curtailment to safeguard farm prices and to prevent the enlargement of surpluses was retained not only in the agricultural production program for 1940 but also in that initially planned for 1941.<sup>2</sup> Toward the close of 1940, rising purchasing power due to defense-industry employment had already begun to increase domestic demand for agricultural products, but the export outlook was still regarded as "unfavorable for the duration of the war."<sup>3</sup> Official efforts to encourage even selected increases in agricultural production were not made until the spring of 1941, however, after Congressional approval of the Lend-Lease Act, with its promise of greater immediate export outlets. On April 3, 1941, the Department of Agriculture announced a cautious plan to stimulate the production of certain livestock products and of a few crops by encouraging price advances and offering stipulated minimum price supports for dairy products, hogs, chickens and eggs up to June 30, 1943.<sup>4</sup> How limited was the conception of prospective food requirements even at this time is apparent from Secretary Wickard's confident prediction two weeks later that, "With our ability to produce, there isn't the slightest need for rationing and there isn't likely to be. American consumers should be able to buy all they want when they want it."<sup>5</sup> Indeed, although the April announcement may be clearly identified on the basis of hindsight as a forerunner of later programs directed toward expansion, it was not until the fall of 1941, two years after the outbreak of the war and on the eve of our own involvement, that the Department of Agriculture committed itself unequivocally to a continuing program of wartime mobilization by launching the "Food for Freedom" drive and publicizing its comprehensive array of specific agricultural goals for 1942.

(3) The development and execution of agricultural mobilization measures was also powerfully influenced by the ominous uncertainty of post-war economic prospects. From the outset many farmers, legislators and government officials appeared to be almost as deeply preoccupied with

2 James A. McAleer, *Farm Machinery and Equipment Policies of the War Production Board and Predecessor Agencies, May 1940 to September 1944*, Historical Reports on War Administration: War Production Board, Special Study 13, mimeographed, November 10, 1944, p. 6.

3 *The Impact of War and the Defense Program on Agriculture*, U. S. Department of Agriculture, mimeographed, October 21, 1940, p. i.

4 *Report of the Secretary of Agriculture, 1941*, pp. 3-4.

5 From an address in Charleston, S. C. (Department of Agriculture news release, April 19, 1941.)

such fears as with current wartime urgencies. The conviction that mobilization policies would largely determine the character of post-war agricultural problems encouraged a searching appraisal of each wartime proposal for its possible effects on post-war readjustments; and consideration of these future consequences often outweighed the demands of the immediate situation. As a result, there was widespread reluctance to consider proposals to expand production beyond immediate needs; to maintain or accumulate large stockpiles of foodstuffs in anticipation of later requirements in a prolonged war; to shift production from customary farm products to those for which demand might decline sharply at the end of the war; and to stimulate increased output of agricultural products in South America and elsewhere abroad which, although needed to alleviate war-induced shortages, might thereafter enter into competition with our exports. Many feared that the more thorough-going the mobilization effected, the more protracted and distressful would be the eventual demobilization. Some opposed the more highly centralized organization and control of wartime food resources lest it lead to the extension of pervasive government controls into the post-war period.

(4) Another distinctive problem of wartime planning in agriculture was a product of the extended duration and unavoidable hazards inherent in the natural cycle of agricultural production. Not even the emergencies of war could accelerate the slow succession of plowing, seeding, cultivation and harvest whereby one spring's sowing controls the following year's eating. Moreover, the decisions by farmers reflected in spring plantings are, in turn, generally governed by the prices prevailing and the official market expectations and policies announced during the preceding fall and winter. Accordingly, any serious inadequacies in the mobilization policies crystallized during the latter half of 1942, for example, would impose their heaviest exactions on the food supply available during the first half of 1944. Planning so far into the future undoubtedly made effective performance far more difficult in agriculture than in situations permitting more rapid adaptation to changing circumstances. Agricultural planning difficulties were further aggravated by the significant influence which could be exerted on resultant output by comparatively unpredictable and uncontrollable shifts in weather.

(5) The fifth of these special problems affecting agricultural mobilization derived from the relatively late emergence of peak food requirements within the sequence of crises which marked the progress of mobilization—as the elimination of one bottleneck after another resulted each time in



transmitting the pressure of war-swollen demands to still further reaches of the economy. The early crisis in procurement, induced by the urgent need to place innumerable contracts at top speed, was succeeded shortly by a crisis in the construction of new facilities and, thereafter, by a critical shortage of machine tools and other production equipment. When months of unremitting effort began to ease these pressing needs, government officials were confronted by a sharply mounting demand for raw materials to feed into the expanded industrial plant. Gradual subsidence of the raw material crisis was followed by a manpower crisis, which remained acute until early in 1945. Each of these crises could have been negotiated more expeditiously if the planning of preventive action and of appropriate control and allocation measures had not been delayed by wishful optimism about the future, by excessive deference to self-seeking groups attempting to retard expansion and conversion, and by reliance on piecemeal measures utterly incommensurate with the broad thrust of national mobilization. While such obstacles impeded the mobilization of agriculture as well, the latter undertaking was also seriously burdened by the fact that its heaviest requirements lay so far ahead in the future—toward the close of the war and thereafter. As a result, the introduction of far-reaching measures during the early part of the war lacked the irresistible pressure of immediate urgency which was the determining force in finally overcoming resistance in all other sectors of mobilization. And when agricultural needs did at last begin to approach peak proportions, belated efforts to intensify mobilization measures were severely handicapped by the prevalent optimism that victory was imminent, and by the fact that the general tide of mobilization was already ebbing rapidly, with demobilization increasingly becoming the center of concern.

In addition to the distinctive problems which have just been summarized, agricultural mobilization was also influenced, of course, by the technical, psychological and political problems common to other sectors of national economic planning as well. Turning to the last of these briefly, the following hypotheses may be suggested as indicative of the role of political considerations in wartime agricultural planning, and perhaps in governmental planning at large:

First, as the effects of planned measures on the population at large, or on influential segments of it, grow more serious, direct responsibility for the basic planning decisions may devolve increasingly upon politically accountable officials rather than upon planning technicians;

Second, the more discomfiting the adjustments proposed as compared with public expectations, the greater may be the tendency for officials who fear the

political consequences of popular resentment to court public favor by scaling down the magnitude of planned goals and by sharply limiting attendant coercions and controls to those lying within the presumed range of political tolerance;

Third, despite the importance of long-term perspectives in planning, politically accountable officials may tend to lay disproportionate stress on comparative immediacies—favoring the alternatives which are least burdensome or which promise the greatest benefits within the period intervening before the next major election, even if such a course should threaten to be much the more costly in the longer run.

The limited materials available do not permit intensive examination of such often subtle aspects of the intricate planning process, but data and findings relating to such matters will be noted from time to time in the following pages.

## 2. MEASURES OF THE ADEQUACY OF AGRICULTURAL MOBILIZATION

Appraisal of the achievements and shortcomings of wartime economic planning in agriculture necessarily rests heavily on the conceptions which are employed as measures of the adequacy of mobilization in this sector of the economy. It may be useful, therefore, to review at this point the conceptions of "adequacy" which gained currency during the war, as well as those which form the basis of the following analysis.

Recurrent official announcements that agriculture had once again surpassed peacetime levels of output by a substantial margin were a continuing source of reassurance to farmers and consumers during the greater part of the war. Useful as such comparisons with pre-war achievements may have been in gauging the extent of wartime expansion, however, they provided no basis at all for appraising the *adequacy* of the gains effected. The latter required rather comparisons of current output with current and prospective requirements. Nor were comparisons with earlier accomplishments a proper measure of the effectiveness of current performance, even in instances where it was impractical to measure results against needs because the latter were considered to be incapable of fulfillment; in such cases, careful analysis counseled the employment of authoritatively estimated maximum practicable potentials as the more revealing standard for appraising actual performance.

General reliance on indices of total agricultural output as a measure of the extent of wartime adjustments to need was misleading in other respects as well. Such aggregative data offered a convenient shorthand

estimate of changes in the volume of production, but they shed little light either on the effectiveness with which available factors of production were being utilized, or on the extent to which the product composition of output had been repatterned in accordance with requirements. Wartime requirements for some crops were far greater and more urgent than for others. Moreover, as will be seen later, alternative farm products cover a wide range of variation in their yield of needed nutrients per unit of farm resources employed in their production. The success of efforts to mobilize land resources, for example, will be found to depend not only on increases in the total acreage brought under cultivation and on advances in average yields per acre, but also on the reallocation of this resource between crop and livestock-supporting enterprises, and even on the distribution of available acreage among the various food crops. Appraisal of the adequacy of agricultural mobilization achievements, therefore, involves taking account of changes in the allocation of productive resources among alternative farming enterprises and in the composition of output, as well as in its sheer volume. Indeed, increases in the total volume of output which result from gains in the production of relatively less essential or less efficient crops may actually represent a net loss because of their partial wastage of scarce resources.

Agricultural mobilization achievements were defended on occasion by pointing beyond the discomforts imposed by food rationing to the extraordinarily high average consumption levels that were maintained in this country even in the midst of war. But this position betrayed an all-too-widespread misconception of the essential task of wartime food management in the United States. As will be demonstrated later, the major food burdens of this government during the war were generated to far less a degree by the wresting away of our customary sources of supply by the enemy than by the necessity for diverting a reasonable proportion of our available supplies to supplement the seriously impaired food resources of the nations actively supporting our common war effort. Hence, the achievements of domestic agricultural mobilization were to be measured primarily not by the consumption level enjoyed by American civilians, but by how much was exported to sustain the strength of allied peoples.

Many who acknowledged the existence of unrealized potentials in agricultural production held an erroneous conception of "maximum capacity" during a period of mobilization for war. In charging apparent shortcomings to inadequate supplies of productive resources, especially of farm labor and machinery, these critics seemed to lose sight of the fact that under the forced draft of war virtually every sector of the economy

registered urgent claims for more manpower, more equipment and more materials. Because of general shortages, allocations of such resources had to be carefully balanced among all of the interdependent parts of the mobilized economy, with even military claims having to be revised downward. Confronted by such irremediable stringencies, the only practicable basis for estimating agriculture's maximum output potentials was in terms of what could be achieved through the most effective possible utilization of only such resources as were allocated to it. From this it follows that one measure of mobilization inadequacies is the extent to which available resources were left partially idle or were diverted to comparatively more costly or less essential employments. Moreover, the cost of such shortcomings may be assessed either in terms of unrealized agricultural output or in terms of the production increments which might have been realized in other war industries from resources equivalent to those not fully harnessed by agriculture.

The emphasis on farm production issues in Washington tended to divert attention from other links in the chain of mobilizing the nation's food resources. These latter included the gathering together of farm products, their transportation, processing and storage, their allocation among major claimants, their distribution to retail outlets, and the patterning of their consumption. All along this process peacetime practices were marked by the under-utilization of facilities and by the costly wastage of foodstuffs. Because the reduction of these losses could contribute very materially to the war larder even in the absence of richer harvests, and, on the other hand, because even significant gains in production could be dissipated by careless handling, spoilage and maldistribution, it is apparent that the adequacy of mobilization achievements can be fully assessed only within this larger setting.

Even the foregoing breadth of focus, however, omits consideration of the adequacy of domestic agricultural mobilization from the standpoint of its contribution to the mobilization of all United Nations food resources. This involved two additional fundamental responsibilities: first, the need for the United States, as the most powerful member of the United Nations, to provide vigorous leadership in persuading all the United Nations to join in a comprehensive mobilization program providing for the expansion of total production, the shifting of production patterns in each area to accord with prospective needs and with the planned division of common burdens, the limitation of domestic consumption to reasonable levels, the stockpiling of exportable supplies in preparation for the sudden impact of liberated areas' requirements, and the management of resulting stocks in

accordance with jointly determined policies; and, second, the collateral need for the United States to maximize its actual net contributions to the United Nations by pursuing domestic mobilization policies which might well serve as a model in reinforcing its proposals to other nations—by enlarging its exports to the utmost, and, as an importer, by also minimizing its own drain on United Nations foodstuff supplies.

Although food resources were one of the major pillars supporting the war effort, although their management directly affected every household in the nation as well as our troops, our allies and the course of post-war recovery in liberated areas, and although reasonably comprehensive data about needs and supplies were readily available for analysis, one can hardly escape the conclusion that public understanding of the objectives, extent and adequacy of wartime mobilization in this sector of the economy fell substantially short of that commonly assumed to be necessary for the exercise of a democratic check on executive policies. Spokesmen for narrow commodity and geographic interests threatened the nation with a variety of calamities, ranging from serious shortages to reckless overabundance; and they freely charged the leaders of the war effort with an array of misdeeds ranging from "totalitarian regimentation" to gross inactivity and ineffectuality. Temporary dislocations were seized upon as evidence of progressive deterioration; intermittent and localized problems were represented as continuous and pervasive throughout the nation; recurrent seasonal adjustments were publicized as seemingly unprecedented crises; and shortages incurred in order further to expand the output of more essential farm products were widely exploited as proofs of failure. The effectiveness of these propagandist forays in sowing anxiety and uncertainty even long before food requirements approached peak levels is suggested by the poll of the American Institute of Public Opinion issued on July 25, 1943, revealing that 67 percent of the American population felt that a thorough investigation of the food situation was necessary.<sup>6</sup>

Among the numerous such investigations undertaken by Congressional committees, most of them concerned primarily with particular current controversies, was that by the Sub-committee on War Mobilization of the Senate Committee on Military Affairs during the late spring of 1943 to appraise the effectiveness of agricultural mobilization and to study the role of food problems in the attainment of the nation's broader war objectives. While the present inquiry had its origin in the hearings which were organized by the author in his capacity as economic consultant to this

6 *N. Y. Times*, July 25, 1943.

Senate Sub-committee and in his subsequent report to that body,<sup>7</sup> the analysis presented in the present volume represents the results of continuing study which has extended on into the early part of 1948.

The present study centers upon the needs, potentials and actual achievements in each major sector of agricultural mobilization during the period 1940-45. Chapter II completes Part A by presenting the scale of current and prospective overseas food requirements confronting the U. S. and the United Nations as seen in 1943, at the outset of the final period during which preparations could have been made to cope with such expected burdens. Chapters III-IX, comprising Part B, appraise in turn the mobilization of land resources, livestock resources, agricultural manpower, farm machinery, fertilizer resources, agricultural credit, and the field administrative apparatus employed in the mobilization program. Part C, which is concerned with allocation and distribution sectors of wartime food management, contains chapters devoted to imports and exports, to domestic civilian consumption, to distribution and rationing, and, finally, to price policies both in relation to mobilization incentives and to inflation control needs. Chapters XIV and XV then review the climate of public controversy over food mobilization policies from the summer of 1944 to the winter of 1946-47, with particular emphasis given to the comparison of food shortage expectations with the deficits which actually materialized. The implications of the wartime experience in agricultural mobilization for national economic planning at large are explored in the concluding chapters.

<sup>7</sup> Although set up in galley by the Government Printing Office in July 1943 as Part 2 of the Sub-committee's *Hearings (pursuant to Senate Resolutions 107 and 607)*, the transcript of these hearings was never printed. A copy of the galley has, however, been turned over to the Hoover War Library at Stanford University. Citations to these hearings will refer to the paging in this galley copy.

## CHAPTER II

### FOOD SHORTAGES ABROAD

Most of the wartime increment in the demand for American food came from abroad: from our allies, from other friendly nations and from the areas liberated from enemy control. Although some of these needs emerged immediately upon the declaration of war, it was apparent from the outset that the total volume of requirements would rise progressively during the period of hostilities and would reach flood tide only with the collapse of the enemy. In general, therefore, mobilization strategy required the prompt and continuous expansion of food production in this country and in all of the agricultural areas of the United Nations. But the more specific planning of remedial measures required a careful prior appraisal of the size, content, locus and causes of the prospective deficits to be overcome.

#### I. THE IMPACT OF WAR ON UNITED NATIONS FOOD SUPPLIES

The first major blow at the adequacy of United Nations food supplies came with the rapid advance of enemy troops. Japan occupied territories which were rich not only in rubber, tin, silk and oil but in important food-stuffs as well. Before the war, Manchuria, the Philippines, the Dutch East Indies and the Malay Peninsula were the source of more than one-third of the vegetable fats and oils entering international trade.<sup>1</sup> Burma, Indo-China and Thailand were the largest rice exporters in the world.<sup>2</sup> Germany's conquests were no less fruitful. The occupation of western Europe cost Britain vital nearby sources of dairy products, pork, eggs and vegetables.<sup>3</sup> Even greater spoils were seized from the Soviet Union: grain, livestock, potatoes, fats and oils, sugar beets and vegetables, drawn from more than 40 percent of its cultivated acreage.<sup>4</sup> Italy's adherence to the

1 Henry C. Taylor and Anne D. Taylor, *World Trade in Agricultural Products*, Macmillan, New York, 1943, p. 184.

2 U. S. Department of Agriculture, *Agricultural Statistics—1942* (a statistical handbook published annually), U. S. Government Printing Office, 1942, p. 50.

3 Edith T. Denhardt, *Food Control in Great Britain*, International Labor Office, Montreal, 1942, p. 4.

4 Lazar Volin, "The Russian Food Situation", *Annals* (Vol. 225: Nutrition and Food Supply—The War and After), American Academy of Political and Social Science, 1943, p. 90.



Axis represented another food loss to the United Nations, drying up sources of cheese, oils, fruits and vegetables.<sup>5</sup>

A second disorganizing factor was the sharply reduced supply of shipping available for agricultural traffic. Partly caused by submarine sinkings and partly due to the diversion of ships from food runs to more urgent military tasks, this transportation bottleneck further contracted the effective food supply by cutting off shortage areas even from needed stocks which had not been over-run by the enemy. Britain, for example, had to institute meat rationing while large surpluses were still available for export in Argentina, Australia and New Zealand. The Soviet Union had to institute increasingly severe limitations on grain consumption at the very time that an international agreement to hold down wartime wheat production was being negotiated by the major exporting countries.<sup>6</sup> Sugar and coffee rationing had to be initiated in the United States despite bulging supplies of sugar in the West Indies and of coffee in Brazil.

In turn came the threat that the temporary disorganization of markets would interrupt the accumulation of eventually needed supplies. Great surpluses with no purchasers led Argentina to burn corn and flaxseed as fuel, simultaneously with the introduction of a drive to increase the production of these commodities in the United States.<sup>7</sup> Brazil reverted to burning excessive coffee stocks. Other countries sought to forestall the accumulation of unwieldy surpluses by curtailing production, as may be illustrated by the decreased output of efficient protein-yielding dry edible beans both in Canada and in Chile.<sup>8</sup> Friendly Central American countries,

<sup>5</sup> For an over-all picture of Italian agricultural exports, see L. B. Bacon and F. G. Schloemer, *World Trade in Agricultural Products*, International Institute of Agriculture, Rome, 1940, pp. 576, 578, 851-3.

<sup>6</sup> The results of the International Wheat Meeting, which issued a Memorandum of Agreement in Washington, D.C. on July 2, 1942, were summarized as follows by Leslie A. Wheeler, Director of the Office of Foreign Agricultural Relations in the U. S. Department of Agriculture: "The terms [of the agreement] are these, that the countries that are producing and exporting wheat, which are the U. S., Canada, Australia and Argentina, will agree to adjust their wheat production downward during the war so as to prevent a further accumulation of surplus." U. S. House of Representatives, Committee on Appropriations, *Hearings on Agriculture Department Appropriation Bill, 1944*, U. S. Government Printing Office, 1943, p. 213.

<sup>7</sup> *Ibid.*, pp. 218-9.

<sup>8</sup> Chile initiated its reduction in such output in 1940, the very year after the beginning of World War II, and kept production nearly one-fourth below the 1939 level during the period of hostilities. Canada decreased its production sharply only after the U. S. entered the war, but its average margin of reduction below 1941 levels was almost as large as Chile's. (*Agricultural Statistics—1945*, p. 273.)



quick to avow support of the United Nations, faced bankruptcy and hunger as the export base of their economies rotted away at ports to which little or no shipping space could be allocated.<sup>9</sup>

A third source of wartime agricultural problems was that importing countries trying to offset the loss of overseas supplies encountered the further difficulty that other urgent war programs were curtailing the supply of resources out of which domestic increases in food production might have been compounded most readily. The agricultural labor force was being reduced by conscription and by transfers to war industries. Heavier applications of fertilizer offered greater yields per acre with little additional manpower, but such contributions, too, were curtailed by the limited shipping available for fertilizer imports and by the transfer of domestic productive capacity to the manufacture of explosives and other urgently needed chemicals. Additional farm machinery would have helped to offset the effects of reductions in farm labor, but such production was limited by the diversion of raw materials and fabricating facilities to even more desperately needed implements of warfare.

The fourth of the basic wartime pressures on the food supply of the United Nations was the substantial increase in total demand for agricultural products. Part of this was occasioned by the mounting requirements of the armed forces, including their need to establish a variety of special reserves against transportation and combat contingencies. Another part of this gain was a product of intensified industrial demands for grains, oils and other agricultural raw materials. Increased physical burdens provided a biological basis for heavier food demands by many sectors of the working population. But the most influential of the factors which contributed to the expansion of demand for food was the general increase in civilian incomes. Nor was the resultant pressure on available supplies mitigated by the fact that most buyers were primarily seeking long-deferred psychological satisfactions rather than essential improvements in the healthfulness of their diets.

Although few areas of the world escaped the impact of these developments, the deficits which constituted the greatest threat to the United Nations' war effort were those experienced by our major overseas allies and, later, in liberated areas. Hence, after providing sufficient food to safeguard the health of our civilian population and to meet the requirements of our armed forces, the primary objective of agricultural mobilization in the United States necessarily had to be to maximize our exports of essential foodstuffs during the period of hostilities as well as immediately thereafter.

## 2. SHORTAGES IN ALLIED COUNTRIES

A brief review of the food situation in the United Kingdom, in the U.S.S.R. and in China during the early part of the war indicates the scale and urgency of their needs for U. S. aid and also sheds some light on the expedients to which these nations had to resort in order to make the most of the food supplies and agricultural resources available to them.

*United Kingdom*

Throughout the war the blockade was one of the chief weapons employed against Britain, and food imports were a key target.<sup>10</sup> Highly industrialized, Britain was importing about 60 percent of its food at the time war was declared, ranging from a mere 3 percent in the case of potatoes to 92 percent in the case of fats.<sup>11</sup> Hence, the British were compelled to make prodigious efforts to reduce their dependence on overseas sources. To this end, a comprehensive program was undertaken which concentrated on expanding the total volume of domestic agricultural production, on shifting both imports and domestic output to the most nutritious foods, and on adjusting consumption to keep diets healthful without indulging preferences which made relatively unnecessary or excessive demands on available productive resources and shipping.

Historic amenities were sacrificed as "England's fair and pleasant land" was plowed up until the acreage tilled by the end of 1942 was more than half again as large as before the war.<sup>12</sup> Although much of the addition was in the form of comparatively less fertile land, yields per acre, too, were forced up—partly by intensified educational efforts, partly by special incentives,<sup>13</sup> and partly through outright compulsion.<sup>14</sup> Inasmuch as crops

<sup>10</sup> For a pre-war analysis of this threat to Britain, see F. LeGros Clark and R. M. Titmus, *Our Food Problem*, Penguin, London, 1939, chapter III.

<sup>11</sup> *Food Control in Great Britain*, pp. 3-4.

<sup>12</sup> Compared with pre-war, the area under tillage had increased by 52.8 percent by the end of 1942 and by 61.9 percent by the end of 1943, despite the large acreages of agriculturally useful land which had to be turned over to industrial and military uses, including airfields. (*Farming in Wartime Britain*, British Information Services, New York, August 1944, pp. 4, 5, 26.)

<sup>13</sup> *Food Control in Great Britain*, pp. 26-33.

<sup>14</sup> "Defense Regulations issued on August 25, 1939, under the Emergency Powers (Defense) Act, 1939, placed the entire agricultural industry of the United Kingdom under the control of the British Ministry of Agriculture during the war emergency. The objective was to insure that agricultural land would be used efficiently and exclusively for the production of essential foodstuffs. Included among the powers conferred upon the Minister is the authority to take possession of land for defense purposes, to see that it is

for direct human consumption yield far greater nutritional returns per unit of farm resources employed in their production, food crop plantings were expanded heavily, aggregate livestock production was decreased, and sharp reductions were effected in the importation of feeding stuffs. Shipping space, too, was economized by providing for the increased domestic production of such necessary but relatively bulky foods as potatoes and green vegetables.<sup>15</sup> As a result of these varied but carefully integrated and vigorously promoted measures, the Minister of Agriculture was reported to have estimated at the conclusion of the 1942 crop year that Britain was producing about 70 percent of its total food requirements.<sup>16</sup>

Civilian consumption underwent similarly sweeping changes, with luxuries of variety and taste sternly sacrificed. Compared with the average for 1934-38, per capita civilian food supplies in 1943 had been reduced by 25 percent in respect to meats, poultry and fish, by 16 and 31 percent, respectively, in the case of fats and oils and of sugar and sirups, and by almost one-half in respect to tomatoes and fruits. These losses had been offset in part by increases of 17 percent in grain products, of 28 percent in dairy products, of 45 percent in potatoes and sweet potatoes, and of one-third in other vegetables.<sup>17</sup> The substitution of more milk, cheese,

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used solely for the production of food, and to issue such directions with respect to the cultivation, management, and use of land as he thinks necessary for the purpose of increasing or maintaining production. He may terminate the tenancy of any holding not being cultivated in accordance with good farming practices and may dispossess an owner-occupier whenever the latter fails to farm his land properly." (Harry L. Franklin, "British Food Control", *Foreign Agriculture*, U. S. Department of Agriculture, December 1939, p. 561.)

"The country could no longer afford to have land badly farmed. Since the outbreak of war, 2,000 farm tenancies, aggregating some 200,000 acres, have been terminated on account of bad farming and cultivation has been taken over by the County War Agricultural Committees acting on behalf of the Government. In addition, the Committees have ploughed up 300,000 acres of what was formerly derelict or undeveloped land." (U. S. Office of Price Administration, *Farm Production and Food Prices in the United Kingdom*, Foreign Information Series No. 17, mimeographed, March 1943, p. 1.)

15 The careful determination of such guiding policies was stressed in the *Sixth Report from the Select Committee on National Expenditures* (H. M. Stationery Office, 1944, p. 25) to the House of Commons. The extraordinary effectiveness of resulting measures is attested by the following estimates of the adjustments which had taken place by 1943 as compared with pre-war levels: the acreage of cereals had increased by 80 percent, that of potatoes by almost 100 percent and that of other vegetables by 54 percent; with respect to the livestock population, the sole increase had been in the category of cattle including milk cows, and came to only 6 percent, whereas sheep numbers had declined by 22 percent, poultry by one-third and pigs by 59 percent. (*Farming in Wartime Britain*, p. 26.)

16 J. J. MacGregor, "Britain's Wartime Food Policy", *Journal of Farm Economics*, May 1943, p. 388.

17 Special Joint Committee of the Combined Food Board, *Food Consumption Levels in the U. S., Canada and the United Kingdom*, U. S. Government Printing Office, 1944, p. 6.

bread, cereals, potatoes, cabbage, Brussels sprouts, carrots and greens in place of pork, beef, mutton, butter, sweets, oranges and other fruits resulted in a per capita supply of nutrients in 1943 which compared favorably with the pre-war average.<sup>18</sup> While such changes served to stay physiological hunger, however, one need only to compare the list of displaced delicacies with their sturdy replacements, and to bear in mind the burdensome monotony of a diet whose content changed only with the slow seasonal succession of greens, to sympathize with the considerable sense of deprivation which developed under these conditions.

Britain's widely admired food rationing and distribution system contributed heavily to the maintenance of average civilian diets above the minimum standards of healthful nutrition.<sup>19</sup> More fundamentally, however, this achievement had been made possible only because imports had continued to supply the one-third of food requirements which even the spectacular expansion of domestic production had been unable to provide. Hence, from the standpoint of production planning in the U. S., it was apparent that the very effectiveness with which available British resources had already been harnessed precluded any prospects of reduction in British import needs and even counseled special efforts to offer some further relief from the depressing effects of a dreary diet on the hard-beset British people.

### *Soviet Union*

Although the Soviet Union taken as a whole had been self-sufficient with respect to food prior to the war, the same kinds of agricultural specialization practiced in other countries divided it into food surplus and food deficit areas. This doubled the blow dealt to the Soviet food supply by the German advances, for not only did the invaders seize more than 40 percent of the country's pre-war cultivated acreage, but this territory included the most important of the food surplus areas. From the Ukraine, the North Caucasus and the Crimea had come two-thirds of the nation's agricultural production, including more than 75 percent of its winter wheat and sugar beets, more than half of its potatoes, barley and vegetable oils, nearly half of its other grains, and a large proportion of its livestock production. The effect was as severe as though the U. S. had been de-

<sup>18</sup> The estimated per capita supply of calories was reduced by 5 percent, of fats by 13 percent and of carbohydrates by 2 percent. An increase of 23 percent in vegetable proteins more than offset a reduction of 7 percent in animal proteins. Supplies were increased in all of the remaining mineral and vitamin categories, in almost each case by larger proportions than had been effected in either the U. S. or Canada. (*Ibid.*, pp. 10-11.)

<sup>19</sup> *Ibid.*, pp. 10-11, 26.

prived of its Middle Western granary almost at the outset of a long war for survival.<sup>20</sup>

As the war progressed through its early years, food needs mounted precipitately in the unoccupied regions, which even in peacetime had been dependent on large in-shipments in order to meet local demands.<sup>21</sup> Millions of evacuated and escaping refugees poured eastward from the invaded areas. The Red Army was being expanded to unprecedented proportions, with its food requirements heightened by the meager transportation facilities serving its vastly extended operations, as well as by the heavier costs of sustaining active fronts during long periods of bitterly low temperatures. Besieged cities devoid of agricultural resources had to be provisioned. At the same time, the food production potentials of these unconquered areas was being contracted by the common pattern of war-induced pressures: by the outpouring of able-bodied farm manpower into military service and war industries, by the release of horses and trucks to the army, by the conversion of tractor and farm implement plants to the manufacture of tanks and other weapons, and by distribution problems which were aggravated by the further over-burdening of an already inadequate transportation system.

Inevitably, the widening gap between needs and supplies had to be absorbed at the level of consumption, both civilian and to some real extent military. Only at the front lines could army rations be more or less maintained.<sup>22</sup> Civilians endured severe curtailment. Black bread, soup and, when obtainable, potatoes were the mainstays of their diet, with some lard spread on the bread and some fat added to the soup to augment the supply of energy fuel. Meat, never as plentiful as in this country, became an infrequent treat. Cereals, fats and sugar were apportioned in accordance with civilian work requirements, based on minimum rates estimated to be necessary for sustenance.<sup>23</sup> Not infrequently, however, even such staples

20 Testimony of Secretary of Agriculture Claude R. Wickard in U. S. House of Representatives, Committee on Foreign Affairs, *Hearings on Extension of the Lend-Lease Act*, U. S. Government Printing Office, 1943, p. 138. Also see Lazar Volin, *op. cit.*, p. 90.

21 U. S. Office of Foreign Agricultural Relations, *The Food Situation 1942-43 in Continental Europe, The Soviet Union and North Africa*, mimeographed, February 1, 1943, p. 62.

22 Although few details were available for publication, the general situation was at least suggested in such statements as the following, carried in the July 10, 1943 issue of *Business Week*: "War Food Administration officials are worried about the Russian food situation. There are hints that not even the Russian army is getting enough calories."

23 *House Hearings on Extension of Lend-Lease Act*, p. 138.

as bread and potatoes could not be supplied in the frugal quantities promised by official rationing levels; and the allowance of fats fell substantially below that in the German civilian diet which was repeatedly adjudged to be seriously or even critically deficient in this respect.<sup>24</sup> According to data reaching American food officials in 1943, per capita civilian food consumption in the U.S.S.R. may well have averaged as low as 50 to 55 percent of our own domestic consumption levels.<sup>25</sup> Such data indicated that a majority of Soviet civilians were obtaining rations equivalent to more than one-third below the levels of nutrition authoritatively considered to be necessary for safeguarding health and productive efficiency.<sup>26</sup>

As recognized in Washington early in 1943, food shortages in the U.S.S.R. posed grave problems for the military as well as the agricultural authorities of the United Nations. Deprivation of such severe proportions threatened to undermine Soviet pressure against the Axis, which, following the capture of the German forces at Stalingrad early in 1943, had

<sup>24</sup> *The Food Situation 1942-43 in Continental Europe, The Soviet Union and North Africa*, p. 64.

<sup>25</sup> "The Russian people have long been on iron rations far more limited even than Great Britain's... Millions of the Soviet people are threatened with starvation." (Lend Lease Administrator Edward R. Stettinius, Jr., *Report to the 78th Congress on Lend-Lease Operations (From the Passage of the Act, March 11, 1941, to December 31, 1942)*, U. S. Government Printing Office, 1943, p. 43.)

"It seems certain that only a comparatively small sector of the urban population [of the U.S.S.R.] ... obtains much more than 2,000 calories per day ... conditions among rural inhabitants vary greatly from place to place and from season to season." (Testimony of Roy F. Hendrickson, Director of the Food Distribution Administration, *Senate Hearings on War Mobilization*, Part 2, galley, p. KH3.)

As related to representatives of the Senate Sub-committee on War Mobilization in the summer of 1943, although held confidential at the time, it was the understanding of responsible American officials that only the war workers in the highest of the U.S.S.R.'s four classes of ration recipients were consuming as much as 2,300 calories, when the government was able fully to implement official ration allowances, and that even the official allowances for the second highest category provided a consumption level averaging less than 2,000 calories.

Even a year later, in 1944, it was officially reported that: "...the Soviet Union's supply of food is still very short and very severely rationed... It has been estimated that food rations of Soviet war workers are on the average only two-thirds of what we in the U. S. would consider the minimum essential for good health. White-collar and professional people receive even less, while adults not contributing to the war effort often receive only a small bread ration." (From statement by Ambassador W. Averell Harriman, House of Representatives, Committee on Appropriations, *Hearings on Foreign Economic Administration Appropriation Bill for 1945*, U. S. Government Printing Office, 1944, pp. 166-7.)

<sup>26</sup> For an outline of such allowances, see Table 40. For a somewhat fuller discussion of the application of such allowances to national consumption levels, see *Food Consumption Levels in the United States, Canada and the United Kingdom*, pp. 25-27.

begun to push the Germans back westward. How clearly the Russians themselves recognized this dangerous food shortage was evident from the fact that they were ranking food equally with planes and tanks in the allocation of precious shipping space,<sup>27</sup> and from the collateral fact that all food received from this country was being used to bolster the rations of Red Army troops.<sup>28</sup> Moreover, American food officials who were seeking to gauge prospective overseas claims on our supplies as a basis for planning production and allocations were faced by the likelihood that Soviet requirements would rise further rather than abate during the remainder of the war. Three factors contributed to this unfavorable outlook: first, the progressive exhaustion of the grain reserves that had been accumulated by the Soviet government in peacetime against anticipated contingencies;<sup>29</sup> second, the certainty that the stripped and devastated areas liberated by Soviet advances would for an indefinite period ahead aggravate, rather than ease, the country's food deficits;<sup>30</sup> and, third, the recognition that, inasmuch as the shipping shortage had forced the scaling down of Soviet requirements to levels far short of essential needs, the progressive increases in cargo space effected by the feverish construction program and by reduced sinkings of Allied tonnage would place a heavy moral responsibility on the United States to expand shipments to this needy ally.

### *China*

Although American agricultural officials were necessarily preoccupied in 1943 with the requirements of the United Kingdom and the U.S.S.R., comprehensive forward planning required that increasing attention be given to the needs of China, which were expected to make heavy addi-

<sup>27</sup> *House Hearings on Extension of the Lend-Lease Act*, p. 138.

<sup>28</sup> Testimony of War Food Administrator Chester C. Davis, U. S. House of Representatives, Committee on Appropriations, *Hearings on Supplemental Lend-Lease Appropriations*, U. S. Government Printing Office, 1943, p. 89.

<sup>29</sup> Lazar Volin, "The Russo-German War and Soviet Agriculture," *Foreign Agriculture*, October 1941, p. 405. Also see *The Food Situation 1942-43 in Continental Europe, the Soviet Union, and North Africa*, pp. 63-64.

<sup>30</sup> "...food is required to maintain the life and health of the looted and impoverished population of the regions which are being liberated from enemy occupation... The Soviet Union will be in need of food imports and of food relief even after the war, during the entire period of restoration of the Soviet agriculture... The restoration of agricultural production in the regions which suffered German occupation will require a considerable period of time, great effort and funds." (Official statement released by Alexei D. Kruitikov, Chairman of the Soviet Delegation to the United Nations Conference on Food and Agriculture, May 24, 1943.)



tional demands on the available food supplies of the United Nations whenever the way could be opened for the large-scale delivery of such aid.

After six years of war, food stringencies in China were acute, even in terms of the low standards of that country, in the unoccupied as well as in the occupied regions. The Japanese had overrun approximately 40 percent of the producing areas<sup>31</sup> which had long enabled China to achieve a high degree of self-sufficiency<sup>32</sup> despite its enormous population and retarded agricultural technology.<sup>33</sup> In the occupied areas the sheer factor of conquest was compounded in its effects on the food situation by destruction, looting and official requisitioning.<sup>34</sup> In the territories left to Free China the strain of supplying the millions of incoming refugees as well as the huge army was accentuated by progressive economic disintegration.

Production in the unoccupied provinces, which had been sufficient to meet customary peacetime levels of need, not only failed to keep pace with expanded requirements but actually declined.<sup>35</sup> The equitable distribution of whatever supplies were harvested was hindered by the wartime deterioration of land transport, as well as by the unwillingness of the better supplied provinces to share their food resources with less fortunate neighbors.<sup>36</sup> Rapidly accelerating inflation contributed further to the curbing of production potentials. As the exchange mechanism began to break down with the disappearance of trade goods and metal currency and with the steady depreciation of printing press money, Chinese farmers did what farmers the world over do in similar circumstances: they curtailed the production of cash crops in favor of achieving greater personal self-sufficiency. In general, the results were greater hunger in the cities, more hoarding in rural areas, and the drying up of the critical channel of trade between them.<sup>37</sup> Another result worthy of note was the continuous seepage

31 From a statement by Dr. P. W. Tsou, High Adviser to the Chinese Ministry of Food, before the Agricultural Outlook Conference in Washington, D. C., October 19, 1943.

32 W. I. Ladejinsky, "The Food Situation in Asia," *Annals*, Vol. 225, p. 92.

33 O. L. Dawson, "Agricultural Reconstruction in China", *Foreign Agriculture*, June 1943, p. 125.

34 For an estimate of Japanese food takings from Occupied China, see W. I. Ladejinsky and F. J. Rossiter, "Food Situation in Far Eastern and South Eastern Asia," *Foreign Agriculture*, April 1942, p. 156.

35 See the following two articles by O. L. Dawson: "Agricultural Policies in Unoccupied China Since 1937", *Foreign Agriculture*, October 1941, p. 410; and "China's Food Problem," *Foreign Agriculture*, May 1944, p. 103.

36 T. H. White and Annalee Jacoby, *Thunder Out of China*, Sloane, New York, 1946, pp. 172-3.

37 Ladejinsky and Rossiter, *op. cit.*, pp. 156, 163-4.



of millions of tons of foodstuffs from Free China into the Japanese-occupied areas.<sup>38</sup>

Deprived of effective access to United Nations food supplies,<sup>39</sup> the Chinese government sought to raise the efficiency with which its limited agricultural resources were being utilized by promulgating measures for "the conversion of farm lands now planted to glutinous rice and other crops of less importance into fields of ordinary rice and other staple food crops; the prohibition of sugar manufacture with rice, and of wine brewing from grains; the restriction of the hulling of rice and wheat . . . [the expansion of] winter sowings on fields usually fallowed throughout the winter and those formerly planted to poppies . . . [and] the reclamation of virgin land and the introduction of scientific farming."<sup>40</sup> In addition, it sought to expand the production of sugar cane, potatoes, vegetables, oilseeds and medicinal herbs.<sup>41</sup> Unfortunately, most of these proposals fell far short of realization on a large scale, representing eventual potentialities rather than promising to satisfy any very substantial proportion of the wartime or immediate post-war requirements of the Chinese people. Thus, according to the most comprehensive estimates available in Washington during 1943, the production of cereal and major supplementary crops in the areas comprising Free China actually declined from an average of 75.0 million tons during 1931-37 to 72.7 in 1940, 71.6 in 1941 and 71.3 in 1942.<sup>42</sup>

China's most urgent food needs were for cereals and protective foods. In the unoccupied areas aggregate supplies of cereals were comparatively adequate as measured by pre-war consumption levels, although maldistribution, hoarding<sup>43</sup> and localized famines<sup>44</sup> condemned many millions to

38 In estimating the volume of food available for consumption in Free China during 1942-43, Dawson makes an allowance of 2.2 million short tons for these illegal exports to Occupied China. ("China's Food Problem", *op. cit.*, p. 102.)

39 For a summary of these transportation problems, see the statement submitted by J. F. Ray, Jr., Chief of the China Branch of the Office of Lend-Lease Administration in U. S. Senate, Committee on Foreign Relations, *Hearings on Extension of the Lend-Lease Act*, U. S. Government Printing Office, 1943, pp. 26-29.

40 Dawson, "Agricultural Policies in Unoccupied China Since 1937", *op. cit.*, p. 420.

41 *Ibid.*, p. 415.

42 Dawson, "China's Food Problem", *op. cit.*, p. 103.

43 For example, the hoarding of rice by landlords is reported to have been widespread throughout the rice-producing areas of Free China. (*Ibid.*, p. 107.)

44 The 1942-43 famine affected 9 million persons in the province of Honan alone, with large additional numbers affected in the provinces of Kiangsi, Chekiang, and Shensi and in the southern part of Kwantung. Crop losses of famine proportions recurred in Honan during 1943-44, although with somewhat lesser severity than in the preceding year. (*Ibid.*, p. 108. Also see White and Jacoby, *op. cit.*, chapter 11.)

painfully meager diets. Even in aggregate terms, however, there was an acute lack of protective foods in Free China; for not only had production in these provinces fallen short of peacetime needs, necessitating imports which had been curtailed by hostilities, but total demands had been materially expanded during the war as a result of the specialized requirements of the army and of civilians engaged in war work.<sup>45</sup> In the occupied regions there were serious shortages of cereals as well as of protective foods. One careful estimate placed the deficit in these supplies in Occupied China, even as compared with the low pre-war levels of consumption, at 9.8 million tons for the single crop year 1942-43.<sup>46</sup> Eagerly sought but hitherto unattained gains in output through changes in crops as well as farming practices promised the reduction of such deficits by between one-third and one-half. On the other hand, it was also to be expected that such deficits would be vastly increased if the defeat of Japan required the gradual beating back of her troops through the occupied provinces, with the heavy attendant loss of food production and stocks that would be engendered by widespread hostilities, looting and further intensified economic dislocations.

Food developments in China up to 1943 suggested, therefore, two conclusions regarding prospective demands on United Nations' food supplies, and, more particularly, on American contributions to them:

1. Any sizeable Allied forces sent to fight on the Chinese mainland would have not only to bring their own food but also enough additional provisions to supplement the inadequate rations of the Chinese troops that would be fighting alongside them;
2. The opening of supply channels into China would involve such heavy immediate demands for foodstuffs, including soybeans and other protective foods and vitamin concentrates as well as rice and wheat, as to counsel the initiation of energetic preparations for the assumption of such burdens by the United Nations long before the expected piercing of the Japanese blockade.

While food shortages in the United Kingdom, the Soviet Union and China held priority from the standpoint of current and prospective military operations, deficiencies which were of marked significance for the political and economic strength of the United Nations were also to be found in other countries associated with the anti-Axis coalition. Shortages of shipping, the restriction of imports, the breakdown of internal trans-

<sup>45</sup> *Ibid.*, p. 102.

<sup>46</sup> *Ibid.*, p. 102.

portation and the heightening of political disturbances had, either singly or in combination, led to aggravated food shortages in the West Indies, Central America, northern and northwestern South America,<sup>47</sup> the Middle East and in India.<sup>48</sup> Indeed, in the case of the latter, the loss of rice normally imported from Burma, combined with severe reductions in output caused by unfavorable weather, produced a famine in 1943; and this interacted with mounting political tensions to create a serious threat to the security of India as a forward base for Allied military operations in the Far East and as a source of war supplies urgently required by the United States and Great Britain.<sup>49</sup>

47 "The drastic curtailment of water-borne transportation, caused by the diversion of shipping for war purposes and sinking of ships in the Atlantic, had created food shortages in areas dependent upon imported foodstuffs. At the same time, shortages of fuel, rubber and replacement parts had put such a severe strain on internal transportation systems that in some areas a complete breakdown was imminent. As a result, certain deficiency areas in the other American republics were threatened not only with serious food shortages, but in some cases with actual starvation. Many of these areas were of strategic military importance, as well as sources of critical and strategic materials where a large influx of population further aggravated the situation. This food shortage not only threatened military and production operations, but also was laying the basis for social and political disturbances which could seriously menace the security of the hemisphere.

"Although most Latin American production is geared primarily to agriculture, emphasis has been placed on crops produced for export, such as coffee, bananas, cocoa, and cotton. These countries in turn have been required to import large quantities of foodstuffs to supply their basic needs. Since the war, these shortages in essential foodstuffs have been accentuated because the world markets, where Latin America sold its produce and purchased its food staples, have either been drastically curtailed or entirely eliminated." (From a statement by James D. LeCron, Director of the Food Supply Division, Office of the Co-ordinator of Inter-American Affairs in *Senate Hearings on War Mobilization*, Part 2, galley, p. KH20.)

For detailed country by country data, see Office of the Co-ordinator of Inter-American Affairs, *Food Supplies and Consumption Deficiencies in the Latin American Republics*, mimeographed, May 1943.

48 "The war has also created shortages in India, most of the countries of the Near East, in the West Indian Islands, and in the Caribbean area . . . [It] is necessary to bear in mind that food consumption was always very low in these countries for the overwhelming majority of the population. Deficiency diseases are widespread, large sections of the population always living just above the starvation level. Even a small decline in the quantity of foodstuffs available is bound to be serious under such conditions." (From the testimony of Roy F. Hendrickson, Director of the Food Distribution Administration in *Senate Hearings on War Mobilization*, Part 2, galley, p. KH4.)

49 It was the understanding of American government officials concerned with foreign food developments that the famine during the latter part of 1943 in India directly caused more than two million deaths and that the epidemics of cholera, small-pox and malaria which followed in the wake of the famine took at least as large a toll.

### 3. FOOD REQUIREMENTS OF LIBERATED AREAS

In continuing this analysis of the outlook in 1943 for prospective overseas demands on the food resources of the U. S. and other United Nations during the remainder of the wartime emergency, attention turns next to the immediate post-liberation requirements of enemy-occupied areas. Burdensome as this additional drain promised to be, the then-recent experience in North Africa had already demonstrated that the allocation of food for civilian consumption in newly-acquired operational and base areas was as much a military necessity as shipments to the Allies.<sup>50</sup>

Prompt expansion of the food supply in such territories served a number of important purposes. It eased tensions induced by continued deprivations which might have engendered food riots and other civil disturbances. It succeeded much more effectively than either money or peremptory authority alone could have in enlisting local labor for the rebuilding of airports and docks, for loading and unloading ships, for helping with internal transportation, and for other military tasks concerned with supply and construction.<sup>51</sup> It both encouraged and supported the rehabilitation of local agriculture, trade and industry, which was expected in time to reduce local dependence on aid from abroad, to provide the United Nations with additional sources of urgently needed food supplies, and to lay a sound foundation for economic recovery.<sup>52</sup> Another result was to help arrest further deterioration in the health of the native population. Less tangible but of major consequence, the accompaniment of Allied troops by heavy food shipments also promised to gain the active friendship of these people by demonstrating a concern for their welfare, and to

<sup>50</sup> The easing of civilian food deficits was recognized as so direct a military and political necessity in the North African campaign that the planning of such measures was closely related to the whole operational strategy and their inception was actually undertaken by the military commander. (Testimony of Lt. Gen. J. T. McNarney, Deputy Chief of Staff of the U. S. Army in the U. S. Senate, Committee on Appropriations, *Investigation of Manpower Hearings*, Part 1, U. S. Government Printing Office, 1943, p. 144. Also see an address before the Foreign Policy Association by Herbert H. Lehman, Director of Foreign Relief and Rehabilitation Operations, on June 17, 1943, Department of State news release, June 16, 1943.) Bread rations were doubled in Tunis the day after our army entered the city. Soon thereafter, a chain of "relief" stores was established offering milk, sugar, tea and other foods—mostly for cash—in all major towns. Some time later, rationing restrictions on grains were removed entirely. (Department of State news release, June 26, 1943.)

<sup>51</sup> Testimony of Herbert H. Lehman in *Senate Investigation of Manpower Hearings*, Part 1, pp. 181-2. Also see *Report to the 78th Congress on Lend-Lease Operations* (March 1941-Dec. 1942), pp. 45-46.

<sup>52</sup> *Report to Congress on Lend-Lease Operations* (For the period ended April 30, 1943), U. S. Government Printing Office, 1943, pp. 18-19.

win respect for the effectiveness as well as the ideals of democratic government—thereby reinforcing Allied propaganda to the satellite and occupied areas of Europe by demonstrating our capacity to deal effectively with the problems of relieving hunger.

Although the character of the needs to be met could be discerned with reasonable clarity, it was extremely difficult to estimate the scale of relief and rehabilitation requirements. The latter would obviously depend on the speed with which the liberating armies advanced, on the amount of food left behind by the enemy or hidden by the people, on the state of agricultural productive resources and transportation, on the season of the year when the occupation was lifted, and on the dietary levels to be maintained during the period of military government and thereafter. Even in the absence of trustworthy predictions about these eventualities, however, there was every reason in 1943 to anticipate that even the most essential requirements of liberated areas would call for shipments far exceeding in volume those that had so far been sent to the Allies.

Some preliminary indication of the general proportions that the food import requirements of European liberated areas might assume could be deduced as follows: by examining the availability of foodstuffs on the continent prior to the war; by then making allowances for wartime adjustments in net imports and in domestic production; and, finally, by estimating the extent to which peacetime patterns of distribution had been altered to the relative advantage of some nations and population groups and to the disadvantage of others. Detailed analysis on a caloric basis revealed that Continental Europe, excluding the Soviet Union, had derived about 90 percent of its pre-war consumption from domestic production. The remainder was contributed by imports, including nearly 10 million tons of feed grains, oil cake and other feedstuffs, and somewhat more than 5 million tons of bread grains, fats and oils, sugar and other foodstuffs. The degree of self-sufficiency was quite high among the major food categories—falling significantly below 90 percent only in respect to fats, where it came to 74 percent.<sup>53</sup>

By the crop year 1941-42 imports had declined by almost three-fourths, and domestic production had decreased by about 8 percent as a result of the destruction of agricultural resources in combat areas, of shortages of labor, farm draft power and fertilizers, and of adverse weather in some regions. Efforts were made to offset these reductions by releasing a part of accumulated food stocks and by some diversion of sup-

53 J. H. Richter, "Continental Europe's Wartime Food Balance", *Foreign Agriculture*, April 1943, pp. 86-88.

plies from feed uses to food uses. Nevertheless, total European consumption was estimated to have declined by about 11 percent in caloric value. Allowing an average of 3,600 calories per day to the 14 million considered to be in the armed forces left an average of 2,420 calories per person for the 341 million civilians on the continent, or approximately 16 percent less than before the war.<sup>54</sup> But such broad averages are deceptive since marked differences were to be found as among the European nations; as between the rural populations, with their irrepressible prior claim on harvested supplies, and city dwellers; and as between urbanites wealthy enough to supplement legal allotments with acquisitions on the black market and those unable to afford even the full quantities allowed them under rationing. It was accordingly estimated, as of mid-1942, that even "If it were to be assumed that 40 percent of the continental population was scarcely affected by the reduction in the food supply, it would appear that the remaining 60 percent must have had its energy intake curtailed by more than one-fourth of the pre-war energy intake. . . . [and, in view of further differences within this 60 percent group] that millions must subsist on much less than three-fourths of the pre-war energy intake."<sup>55</sup>

Consumption levels apparently declined somewhat further in Europe during the crop year 1942-43, especially in the occupied countries.<sup>56</sup> In the absence of more detailed data on the scale and distribution of consumption deficits for that year, one may obtain reasonable approximations by reference to such estimates for the following year, inasmuch as it was officially reported that, "For the continent as a whole . . . [there was] little change in the food situation during 1943-44 as compared with 1942-43."<sup>57</sup> As of the end of the 1943-44 crop year, it was estimated that:

. . . there are probably 60 million people in Greece, Poland, Belgium, Norway, France, Italy, Spain and Yugoslavia whose average of energy foods is less than 75 percent of the normal pre-war quantity consumed, and perhaps 40 million of these subsist on 60 percent or less . . . Even if a liberal allowance is made for the consumption of unrationed foodstuffs, . . . [diets] do not provide more than 1,800 calories per adult in the Netherlands, 1,600 in Norway, 1,500 in Belgium and France, and even less in some other countries . . . In some instances, not even the legal rations are fully available.<sup>58</sup>

<sup>54</sup> *Ibid.*, pp. 89, 92.

<sup>55</sup> *Ibid.*, p. 92.

<sup>56</sup> *Report of the Secretary of Agriculture, 1943*, U. S. Government Printing Office, 1944, pp. 66-67.

<sup>57</sup> Office of Foreign Agricultural Relations, "Food in Continental Europe and the Soviet Union," *Foreign Agriculture*, June 1944, p. 124.

<sup>58</sup> *Ibid.*, p. 124.

Thus, by 1944 hunger had become general, starvation commonplace; death rates had climbed to new peaks and there were widespread reports of a sharp rise in the incidence of tuberculosis and other diseases.<sup>59</sup>

The planning of aid to liberated areas had been initiated during September 1941, when a meeting of governments-in-exile led to the formation of the Inter-Allied Relief Commission, later the Inter-Allied Postwar Requirements Commission.<sup>60</sup> Although most of the continental representatives engaged in this undertaking pressed hard for acceptance of a minimum dietary objective of 2,600 calories per day, they were finally persuaded by the patent inadequacy of anticipated food reserves and shipping to accept a 2,000 calory target for the initial and presumably brief period when relief would have to be handled by the military authorities. This was done with the tacit understanding that the administration of relief would be turned over to civilians soon after liberation, even in areas continuing under military government, and that ration allowances would then be raised.<sup>61</sup> The initial goal of 2,000 calories would have provided little more than two-thirds of the average caloric intake in Europe prior to the war, and it was seriously inadequate relative to recognized nutritional standards for the maintenance of health.<sup>62</sup> Nevertheless, even 2,000 calories were expected to improve pre-liberation consumption levels significantly,

59 For example, the general death rates for 1942 were at least 12 percent higher than for 1938 in Belgium, France and the Netherlands. (*Ibid.*, p. 125.) Also see testimony of Foreign Economic Administrator Leo T. Crowley in May 1944 before U. S. House of Representatives, Committee on Appropriations, *Hearings on Foreign Economic Administration Appropriation Bill for 1945*, U. S. Government Printing Office, 1944, p. 285.

60 Testimony of Assistant Secretary of State Dean Acheson, *ibid.*, p. 244.

61 For the expected course of relief assistance, see the address before the Kiwanis Club of Baltimore by Francis B. Sayre, Deputy Director of Foreign Relief and Rehabilitation Operations, Department of State, on July 8, 1943. (Department of State news release.)

Although the pressure for 2,600 calories was reported to the Senate Sub-committee on War Mobilization in mid-1943, it did not emerge officially until after the formal establishment of the United Nations Relief and Rehabilitation Administration when it was reported that: "The committee for Europe has recommended an average daily diet for Europe of 2,650 calories, recognizing that this standard would vary as to countries and areas." (United Nations Relief and Rehabilitation Administration, *UNRRA Review*, No. 1, covering August 1944, Washington, p. 2.) For further comment on acceptance of the 2,000 calorie goal during the initial period, see Roy F. Hendrickson, "Europe's Food and UNRRA'S Job," *Foreign Commerce Weekly*, November 11, 1944, p. 45.

62 "Two thousand calories, 1,200 less than ours, is the minimum for an emergency subsistence diet." (From testimony of Leo T. Crowley, in *House Hearings on Foreign Economic Administration Appropriation Bill for 1945*, pp. 284-5.)



to prevent further deterioration of the general health, and to provide a practicable basis for at least commencing the long job of rehabilitation and reconstruction.

The planned minimum ration level was one of the basic components of the estimates of prospective food import requirements in European liberated areas which were first being prepared on a comprehensive basis toward the close of 1942. A second was the assumption that enough food supplies and agricultural resources would be left in these territories after the enemy's withdrawal to supply an average consumption of 1,600 calories, or 80 percent of the proposed dietary level.<sup>63</sup> This expectation derived some support from available data on food production in the occupied countries, and also from the early experience in North Africa. On the other hand, it seemed overly hopeful in view of the tragic conditions which had been found in Sicily and Southern Italy<sup>64</sup> and were being reported from the Eastern Front. Nevertheless, even this possibly optimistic assumption involved the grave premise that the United Nations would have to supply and deliver food enough to provide full 2,000 calorie rations for one-fifth of the total population liberated.

Having arrived at the foregoing estimate of the proportionate deficit per ration, the appraisal of total import requirements called next for consideration of the numbers to be aided. One informed forecast, made public in mid-1943, envisioned the necessity in Europe alone "... to afford relief to as many as 150-160 million people between now and the end of 1944. Among these the need will be pitiful, immediate and great beyond anything in the history of war."<sup>65</sup> Enormous as were these contemplated burdens, even larger potentials had yet to be considered, for the population

63 "...a European 'requirements area' was taken, comprising countries on the outer fringe of the continent that may be the first to be occupied—Norway, Netherlands, Belgium, France, Greece, Italy, Albania and the coastal areas of Yugoslavia... Total population of this requirement area is about 115 million. Total food relief requirements during the first year [of liberation] will be equivalent to a year's complete feeding of 23 million persons... [Proposed shipments] would represent an addition of 20 percent to the volume of foods likely to be available from domestic production. It would enable those persons who will be in need of relief during the year to maintain their consumption at an average of about 2,000 calories per day—the minimum recommended for the first year of occupation." (Interdepartmental Committee on Food Relief, *Food Relief for Occupied Countries*, mimeographed, Washington, December 18, 1942, pp. 1-2.)

64 Indeed, requirements were so greatly in excess of Allied expectations and supplies that rations in the liberated regions of Italy actually were less than were available in the areas still behind the German lines. (*Business Week*, March 11, 1944, p. 9.)

65 From previously cited speech by Francis B. Sayre on July 8, 1943. (See footnote 61.)



of the continent, excluding the United Kingdom, the Soviet Union, the neutrals and Germany itself, came to about 250 millions.<sup>66</sup> Thus, as seen in 1943, food planning had to take account of the possibility that the import load on the Continent, excluding the Soviet Union, might reach a maximum equivalent to daily rations of 2,000 calories each for 30-50 million persons, with the peak tending to approach the higher figure if Allied advances proceeded so rapidly as to free the last of the occupied territories before the first of those liberated had yet been able to curtail their import requirements. It should be noted that even these seemingly extreme projections—which were additional, of course, to the continuing requirements of the United Kingdom and the Soviet Union—did not as yet include any allowance for the huge needs anticipated in China, nor for the possibility that it might be found advantageous to make some shipments available to Germany and Japan after their surrender.<sup>67</sup> Moreover, although wartime plans and programs were concerned primarily only with shortages expected up to and for some brief period after the termination of hostilities, it was already apparent, even in 1943, to some thoughtful officials that food shortages of substantial proportions would continue for years thereafter.<sup>68</sup>

#### 4. THE GAP BETWEEN NEEDS AND SUPPLIES

Balanced appraisal of the impact of foreign food developments on U. S. agricultural resources required consideration not only of import

<sup>66</sup> *Ibid.* It is also of interest to note that even two years later Foreign Economic Administrator Leo T. Crowley was reported as saying that nearly 250 million persons in Europe would have to receive supplemental food (i.e. imports from abroad) "just to exist." (*Washington Evening Star*, May 4, 1945.)

<sup>67</sup> The possibility of such contingencies could hardly be ruled out in view of the following comments by Secretary of Agriculture Claude R. Wickard: "The food situation in Germany is still considerably better than it was in the comparable period of the first world war, but a downward trend from the earlier years of this war has been clearly apparent for some time... Ordinarily, Japan proper depends upon food imports for over 20 percent of her population, and large quantities of imported fertilizers are needed to produce food crops for the other 80 percent. Chosen (Korea) and Formosa furnish much of the rice, sugar, fruits and other products normally needed in Japan proper... with the elimination of Chosen and Formosa as sources of supply, ... serious food difficulties would result in Japan proper." (*Report of the Secretary of Agriculture*, 1943, pp. 69-70.)

<sup>68</sup> For example, this prospect was called to the attention of the Senate Subcommittee on War Mobilization in a statement by Morris Rosenthal, Assistant Director of the U. S. Board of Economic Warfare, on July 14, 1943: "It is now generally recognized that the need for foodstuffs, for human consumption and for industrial use, is rising so fast that even with the development of new sources of supply we are likely to be faced with a world-wide shortage of foodstuffs for many years to come." (*Senate Hearings on War Mobilization*, Part 2, galley, p. KH24.)

deficits abroad but also of the contributions of other friendly areas to the easing of urgent food shortages among the United Nations. This called for recognition of two basic facts relating to the international movement of agricultural products: first, that the U. S. was but one of the several major sources of exports still accessible to the anti-Axis coalition; second, that the U. S. was itself an important claimant for certain of the products available for export by these other countries.

A summary comparison of essential import requirements with exportable supplies revealed significant shortages in a variety of food categories as early as 1943, not only at the level of American allocations but for the United Nations as a whole. Moreover, the trends in prospective requirements already discernible at that time threatened a rapid widening of the gap between needs and supplies, if prompt and far-reaching measures were not taken to expand the volume of needed foods available for export.

#### *United Nations Supplies and Requirements*

The food exporting areas which were available to the United Nations were, of course, widely dispersed geographically, thereby intensifying transportation burdens, and significantly different from one another in the composition of their exportable supplies, thereby accentuating the need for carefully correlated food mobilization programs. Canada, Australia and New Zealand were the sources of most of the available wheat, butter and cheese and of a large share of the meat. Argentina, Brazil and Uruguay provided large exportable supplies of fats and oils, coffee and meat. The comparatively heaviest contributions available from the United States were rice, dried beans and peas, processed milk, dried eggs, canned fish and dried fruits. Other large quantities of sugar, vegetable oils, pulses, cocoa and rice were supplied by the Caribbean region, parts of west-central and south-eastern Africa, and certain areas along the western coast of South America.

It was authoritatively estimated in 1943, as shown in Table 1, that total United Nations exportable supplies of foodstuffs for that year would come to about 121.5 billion pounds. Wheat alone accounted for over 60 percent of this total, and sugar and coffee accounted for more than another 20 percent. The remaining one-sixth was composed of 8.2 billion pounds of meat, canned and salted fish and dried eggs, 4.7 billion pounds of fats and oils, 2.5 billion pounds of cheese, butter and canned and dried milk, 1.6 billion pounds of rice, and somewhat lesser quantities of cocoa, dried fruits, and pulses. A summation of exportable supplies by producing areas reveals that, on a tonnage basis at least, the United States was the source

of less than 8 percent of the United Nations total in 1943, and of less than one-third of the total excluding wheat, sugar and coffee.

TABLE 1

UNITED NATIONS EXPORTABLE SUPPLIES OF FOODSTUFFS, BY MAJOR COUNTRY GROUPS, 1943<sup>1</sup>  
Millions of Pounds

Commodity	Canada, Australia, New Zealand	Argentina, Brazil, Uruguay	United States	Other sources	Total	U.S. pro- portion of total  (%)
Wheat and flour, wheat equivalent .....	57,000 <sup>2</sup>	15,000 <sup>3</sup>	3,000	.....	75,000	4
Rice, milled basis .....	10 <sup>4</sup>	152	620	783	1,565	40
Dried beans, peas, etc. . .	90 <sup>5</sup>	22 <sup>6</sup>	680	400	1,192	57
Fats and oils, oil equivalent <sup>7</sup> .....	101 <sup>8</sup>	1,682	401	2,558	4,742	8
Butter .....	437	32	132	.....	601	22
Cheese .....	423	31	300	.....	754	40
Canned milk .....	39	4	687	16	746	92
Dried milk .....	26	1	347	3	377	92
Dried eggs .....	16	..... <sup>9</sup>	301	.....	317	95
Meat, carcass weight ...	2,049	2,565	2,734	67	7,415	37
Salted fish (cod and related species), dry salt basis .....	27	0	0	98	125	0
Canned fish .....	100	0	173	60	333	52
Sugar .....	300 <sup>4</sup>	200 <sup>6</sup>	0	20,400	20,900	0
Dried fruit .....	136 <sup>2</sup>	.....	320	120 <sup>10</sup>	576	56
Coffee .....	0	3,545	0	2,000	5,545	0
Cocoa .....	0	300	0	1,060 <sup>11</sup>	1,360	0

<sup>1</sup> For a few commodities for some countries other 12-month periods have been used, notably in the case of dairy products where exportable supplies from the U.S. are for the year beginning July 1943.

<sup>2</sup> Canada and Australia.

<sup>3</sup> Argentina and Uruguay.

<sup>4</sup> Australia.

<sup>5</sup> Canada.

<sup>6</sup> Argentina and Brazil.

<sup>7</sup> Net exportable supplies after allowing for essential import requirements.

<sup>8</sup> New Zealand.

<sup>9</sup> Dried egg production capacity in Argentina is variously estimated at between 10 and 25 million pounds a year.

<sup>10</sup> Includes South America.

<sup>11</sup> Approximately 80 percent in West Africa.

Source: Included in statement submitted to Senate Sub-committee on War Mobilization on July 13, 1943 by L. A. Wheeler, Director of the Office of Foreign Agricultural Relations. (*Senate Hearings on War Mobilization*, Part 2, galley, p. KH 30.)

Compilation of a comparable table of current requirements was beset with a variety of difficulties, among them the elasticity of the very concept of requirements. At one extreme, import requirements might have been defined to mean the additional quantities of foodstuffs needed to raise average diets in all countries actively serving the Allied cause to the nutri-

tional levels deemed necessary for the development and maintenance of vigorous health. Even with such humanitarian objectives pushed aside by war urgencies, requirements might have been determined in accordance with the supplementary shipments necessary to restore 85, 90 or 95 percent of the far-from-extravagant average consumption levels which obtained in these countries prior to the war. At the lowest extreme consonant with minimizing serious threats to the United Nations' war effort as a result of critical food shortages, import requirements might have been set at the levels necessary to ensure the armed forces in each of these countries of at least 3,200 calories daily per capita and of a minimum civilian diet of 2,000 calories, possibly rising later to 2,600, along with appropriate quantities of other needed nutrients. Moreover, after designating the level to be considered as the practicable minimum, attention had to be given to the possibility of establishing somewhat more generous objectives for the nations bearing the heavier burdens of active belligerency.

But even after adopting some basis for appraising eventual requirements, food planning officials were still confronted by a series of issues to be resolved in connection with the estimation of annual requirements during the intervening period. One set of differences concerned whether or not a realistic statement of requirements necessitated the inclusion of an allowance for stocks to be accumulated so as to ease the impact of liberation and other deferred requirements as they materialized. Another concerned whether all requirements in excess of available shipping in a given period should be written off forthwith or whether they should be carried forward into the succeeding period on the grounds that a shortage of carriers could hardly be regarded as assuaging needs which had already been scaled down to the minimum levels regarded as essential to the effective prosecution of Allied war objectives. Similar differences arose in respect to requirements which exceeded the supply of foodstuffs currently available for export. The limitation of import requirements to cover only demonstrably essential needs, and their further reduction to the quantities that could be currently supplied, shipped and delivered offered the political advantage in exporting areas of decreasing the immediate pressure for expanding production and curtailing consumption. On the other hand, such a course of obscuring the true proportions of inevitable demand by arbitrarily shrinking it to accord with currently anticipated supplies virtually ensured that preparations for assuming such deferred burdens would be gravely inadequate—thus foreshadowing either the abrupt imposition of sharp restrictions on consumption in exporting areas as military victory

drew near, or the emergence of such severe deprivations in liberated areas as to jeopardize both their economic recovery and their political stability.

It was apparent in 1943, even without a detailed compilation of all known claims, that available supplies were already short of United Nations food import needs. What was probably the most authoritative survey available at the time—that conducted by the Combined Food Board—reported essential import requirements in 1943 of 41.1 billion pounds for wheat, sugar and coffee and of 20.3 billion pounds for all other major food categories, as compared with anticipated exportable supplies of 101.4 billion pounds and 20.1 billion pounds, respectively.<sup>69</sup> Having been prepared by those concerned primarily with the practical immediacies of allocating assured exports within the framework of realistic shipping expectations, however, this estimate of requirements specifically excluded a variety of important claims, and included others only after arbitrarily scaling them down “to conform with the scarce supply situation.”<sup>70</sup> Thus, in the case of wheat, sugar and coffee, requirements had been reduced below the needs even of the incomplete list of claimants encompassed by the tabulation in accordance with the limited shipping allocations in view.<sup>71</sup> Other elements of this survey which contributed far more heavily to its understatement of total requirements included: the assumption that United Kingdom stocks of dairy products would be consumed at a rate which could not be maintained for even one more year; the admitted incompleteness of data on all military requirements except meat; the exclusion of India’s need for rice imports of more than 2.3 billion pounds “because under existing supply conditions it will probably be impossible to provide any appreciable quantity”; the exclusion of import requirements for the civilian population of the Soviet Union;<sup>72</sup> and the exclusion of all requirements for China and even for the liberated areas of Europe.

69 Requirements for commodities other than wheat, sugar and coffee included 8.7 billion pounds of meat, canned and salted fish and dried eggs, 4.2 billion pounds of fats and oils (the difference between this figure and estimated supplies of 4.7 billion pounds being accounted for by Argentine linseed “not yet adaptable for food use in large quantities”), 2.0 billion pounds of butter, cheese, and canned and dried milk, 3.1 billion pounds of rice and smaller quantities of pulses, dried fruits and cocoa. (“Chart A: United Nations export supplies and import requirements of foodstuffs, 1943,” submitted by Leslie A. Wheeler, Director of the Office of Foreign Agricultural Relations in *Senate Hearings on War Mobilization*, Part 2, galley, p. KH30.)

70 *Ibid.*

71 Statement submitted by Leslie A. Wheeler in *Senate Hearings on War Mobilization*, Part 2, galley, p. KH28.

72 “Chart A”, *ibid.*, p. KH30.

As a result of such revisions and omissions, these estimates might more accurately have been characterized as prospective allocations than as requirements, and the former was indeed the primary focus in their preparation. In spite of the limited scope of these detailed estimates, however, the general conclusion drawn from the survey was that "... all major food commodities (other than wheat, sugar and coffee) are in either deficient supply or in slightly excess supply when measured against the scaled-down requirements of current claimants. . . . But they would all be in deficient supply if measured against full requirements, especially if relief needs were to be included."<sup>73</sup>

For those officials who were concerned with planning not within the confining limitations of short-run probabilities but in terms of longer-term objectives and the means of breaking down barriers to their attainment, the order of magnitude of total food requirements could have been approximated in 1943 by supplementing the totals of the foregoing survey with estimated allowances for the claimants not covered by it. Reliable and detailed information about the specific requirements of each was, of course, unobtainable at the time. As a tentative basis, however, one could have used the existing estimates of the scale and patterning of food import requirements derived by the Interdepartmental Committee on Food Relief in considering the needs of occupied countries in Europe—thus assuming that these would be roughly indicative of the general character of needs in other areas, especially at the level of totals encompassing a wide variety of foodstuffs.<sup>74</sup> In this connection, two key findings of the committee were particularly relevant: first, that in order to provide the peoples in need of supplies from abroad with an average consumption of 2,000 calories daily during the first year of liberation, import requirements in the areas studied would be equivalent to the complete feeding of one-fifth of the total population; and, second, that aid of such proportions to an area with a population of 115 millions would require food shipments aggregating some 11.6 billion pounds, of which 6.4 billion pounds or about 55 percent represented commodities other than wheat products and sugar.<sup>75</sup>

From the omissions which have been noted in the Combined Food Board's survey it is apparent that the heaviest additional requirements to be considered from Allied territories were those originating in the Soviet Union and China. Inasmuch as the requirements already included for the

<sup>73</sup> Statement submitted by Leslie A. Wheeler, *ibid.*, p. KH28.

<sup>74</sup> *Food Relief for Occupied Countries.*

<sup>75</sup> *Ibid.*, pp. 1, 19.

United Kingdom were comparable to the actual imports which were maintaining British consumption at an average level exceeding 2,800 calories daily, or only 5 percent below pre-war levels, there was comparatively little urgent necessity to make further allowances for this claimant, even while recognizing the discomforts imposed by wartime curtailments in the volume and composition of diets. In respect to the 110-125 million civilians then estimated to be behind the Soviet lines,<sup>76</sup> available information on the extent of devastation and of food shortages suggested that the ratio of import requirements would be at least as great as those anticipated in the 8 countries studied by the Interdepartmental Committee, i.e., that raising diets even to the minimal 2,000 calorie level would require imports equivalent to the complete feeding of about 20 million people, and that about twice as much would be needed in order to raise average civilian consumption to mid-way between this rockbottom level and the far-from-generous one available to British civilians. Preliminary estimates made during 1943 placed the urgent food import requirements of China at 6.4 billion pounds during the first six months after liberation,<sup>77</sup> thereby indicating annual requirements again roughly equal to those of the 8 countries studied by the Interdepartmental Committee.

The largest of the remaining food import requirements to be estimated and then added to the foregoing were, of course, those of the liberated areas of Europe. As has been noted, they were expected to total about 11.6 billion pounds during the first year, even on the assumption that only one-third of the people in occupied countries would be liberated within that period. On this basis, therefore, it might well have been considered optimistic to envision annual requirements from all liberated areas reaching an eventual peak no greater than twice the anticipated needs of the first year. Continuing with requirements in Europe, additional allowances equivalent to complete 2,000-calorie rations daily for perhaps 5-10 million people, had yet to be considered in order to provide for feeding the millions of displaced persons either impressed into German labor service or penned up in concentration camps, and also for easing some of the more extreme shortages that could be expected to develop within Germany itself during the period of disorganization likely to ensue after the defeat of its armies and the collapse of its government.

To these estimates of European needs had to be added anticipated requirements of significant proportions in other parts of the world. Import

<sup>76</sup> *The Food Situation 1942-43 in Continental Europe, the Soviet Union, and North Africa*, p. 61.

<sup>77</sup> Reported in *Business Week*, December 4, 1943, p. 18.



needs in Japan might reasonably have been expected to approach the levels estimated above for Germany, especially in view of the probable loss of access after military surrender to most and perhaps all of the foodstuffs hitherto obtained from Taiwan, Korea and Manchuria, as well as from other occupied areas. The estimation of India's urgent requirements involved taking into account not only the known deficit of 2.3 billion pounds of rice in addition to famine relief needs, but also the possibility of including some further allowances to safeguard the strategic security of a nation whose desperate needs were evident from its average intake of only 1,700 calories daily per capita, and from reports that over one-third of its population of 390 millions were going hungry.<sup>78</sup> Finally, attention had also to be given to the further food import requirements of Latin America, of North Africa and of European neutrals, as well as to the shortages likely to be encountered in the Philippines and in the other areas to be liberated in the Pacific.

In the aggregate, these estimates foreshadowed potential maximum annual food import requirements during the first year following the cessation of hostilities of some 60-70 billion pounds of wheat and sugar, and of some 30-35 billion pounds of other foodstuffs—both of these being additional to the annual level of requirements already covered by the survey cited above. Such perspectives indicated a progressively rising level of annual food import requirements culminating in a peak approaching the order of 100-110 billion pounds of wheat and sugar and of 50-55 billion pounds of other foods. Of course, any such estimates had necessarily to be based more on hazardous suppositions than on verifiable data and, in consequence, were subject to a wide margin of error. It would have been erroneous to assume, however, that such margins were necessarily on the side of overstating total requirements, inasmuch as none of the estimates allowed for average rations in excess of 2,000 calories, except in the case of the United Kingdom, and inasmuch as the above estimate of maximum additional requirements was rendered even more conservative by excluding all needs outside of Europe, the U.S.S.R., China and Japan—with the single exception of India's rice deficit. At any rate, the outstanding conclusion to be drawn from these estimates was that prospective requirements for foodstuffs other than wheat and sugar would probably reach a peak roughly two-and-one-half times as great as the largest supply of such commodities which had yet been considered available for export in any

<sup>78</sup>From an address by Sir Girja S. Bajpai, Agent-General for India in the U. S., before the U. S. Department of Agriculture's "Agricultural Outlook Conference" in Washington, D. C. on October 19, 1943.



wartime year through 1943. Nor was the outlook for fulfilling wheat and sugar requirements notably reassuring; for these requirements were expected to rise annually to an eventual peak which would in one year alone absorb all of the exportable supplies that had been accumulated by 1943 as a result of pre-war surpluses as well as of wartime production.

These grave prospects emphasized the urgency of expanding exportable supplies of needed foodstuffs to the utmost, for although requirements were not expected to swell to maximum proportions at once, neither could such a peak have been considered far off in practical terms. Looking ahead in 1943, import requirements were expected to mount toward their eventual peak in three major stages, as envisioned by informed food officials at the time: 1944 was expected to add the requirements of the 115-160 millions whose liberation was hoped for during the first year of the Allied assault on the European continent;<sup>79</sup> 1945 was expected to add the huge requirements of all of the rest of Europe, including ex-enemy as well as liberated areas; and the last major increment, representing the needs of China, Japan and other Far Eastern areas, was expected to materialize during 1946, if not sooner. According to such estimates, only two full crop years remained before food import requirements were expected to reach flood-tide. Moreover, in view of the heavy increases in requirements likely to emerge during 1944 and 1945, it was apparent that only the most far-reaching efforts to decrease consumption in exporting areas as well as to increase their production could be expected to prevent a further widening of the gap between supplies and needs, with attendant political and economic hazards.

With prospective requirements of such huge proportions, and the United States as a major source of needed supplies, the fullest possible development of American food production potentials was of crucial importance. In the United States, too, requirements had already outrun available supplies in a variety of major categories of foodstuffs as early as 1943, despite the substantial gains in total production which had been recorded since 1940.

As shown in Table 2, a balance sheet comparing requirements for American foodstuffs with allocable supplies for the fiscal year 1943-44, prepared by the Requirements and Allocations Control of the U. S. Food

<sup>79</sup> The Interdepartmental Committee on Food Relief estimated that aid would be required for about 115 millions during the first year of the combined all-out assault. (*Food Relief for Occupied Countries*, p. 1.) Francis B. Sayre, Deputy Director of Foreign Relief and Rehabilitation Operations in the State Department, estimated that as many as 150-160 millions would have to be helped before the end of 1944. (*Op. cit.*)

Distribution Administration in July 1943, showed deficits aggregating more than 9 billion pounds, even after requirements had been arbitrarily cut somewhat in view of food and shipping shortages.<sup>80</sup> The shortage in dairy products alone was estimated to exceed 3.7 billion pounds, and the shortage of potatoes was almost as large. Other foods in short supply included edible fats and oils, canned fish, eggs, beans and peas, rice, sugar and canned fruits and juices. In addition to wheat, the only categories in which supplies exceeded requirements were total meats, sweet potatoes, canned vegetables and butter—and in not one of these four was the margin of surplus equal to even 1.5 percent of requirements.

TABLE 2  
COMPARISON OF TOTAL REQUIREMENTS FOR SELECTED U.S. FOODSTUFFS WITH  
ALLOCABLE SUPPLIES, FISCAL YEAR 1943-44  
Millions of Pounds

Commodity	Total requirements	Allocable supplies	Deficit or surplus
Butter .....	2,121.8	2,127.6	+ 5.8
Dry skim milk .....	905.0	522.2	— 382.8
All other dairy products (whole milk equivalent, fat solids basis) .....	76,450.2	73,050.6	— 3,399.6
Total meats, dry weight .....	23,207.0	23,283.2	+ 76.2
Canned fish .....	789.6	723.5	— 66.1
Eggs (fresh egg equivalent) <sup>1</sup> .....	5,074.5	4,986.5	— 88.0
Edible fats and oils, excluding butter .....	6,176.8	6,061.5	— 115.3
Beans and peas .....	2,645.6	2,635.0	— 10.6
Rice, milled basis <sup>2</sup> .....	2,226.5	2,037.9	— 188.6
Potatoes .....	29,164.1	25,496.0	— 3,668.1
Sweet potatoes .....	5,005.5	5,038.0	+ 32.5
Canned fruits and juices, excluding citrus juices .....	69,104.0 <sup>3</sup>	61,100.0 <sup>3</sup>	— 8,004.0 <sup>3</sup>
Canned vegetables .....	199,751.0	202,300.0	+ 2,549.0
Sugar, raw (direct and indirect) .....	12,834.0	12,190.4	— 643.6

<sup>1</sup> Millions of dozens.

<sup>2</sup> 14-month period, May 1, 1943-June 30, 1944.

<sup>3</sup> Thousands of cases, containing 24 no. 2½ cans each.

Source: Prepared by the Requirements and Allocations Control, Food Distribution Administration, July 7, 1943 and presented in *Senate Hearings on War Mobilization*, Part 2, galley, p. SO 46.

As has been noted, however, it was apparent that much greater requirements lay ahead. And in addition to expanding actual food exports, a rounded program of agricultural mobilization also required provision for more direct means of speeding the restoration of productive capacity in deficit areas. Accordingly, special measures had to be devised for ensuring the eventual availability for overseas shipment of large quantities of

<sup>80</sup> From the testimony of Roy F. Hendrickson, Director of the Food Distribution Administration, in *Senate Hearings on War Mobilization*, Part 2, galley, p. KH6.

seeds, farm tools, fertilizers, pesticides, and other necessary farming supplies. Attention had also to be given to the practicability of supplying draft animals and food-producing livestock in order to expand and improve breeding potentials in areas where foundation herds had been subjected to particularly severe depletion. Each shipment of such productive resources promised a far more than equivalent reduction in long-run demands for continued help.

*Prospective Duration of Extraordinary Import Requirements*

Development of a cogent food strategy required prior assessment not only of the scale of prospective requirements but of their duration as well. Under-estimation of the latter threatened serious consequences not only through stimulating pressure for an early relaxation of food mobilization measures, but also by encouraging an avoidance of far-reaching adjustments in production and consumption in the hope that more superficial expedients would suffice or that their shortcomings would, at any rate, be short-lived.

Careful reflection and analysis offered scant grounds, even in 1943, for the widespread belief that the international food crisis would disappear with the gathering of the first harvest after the cessation of hostilities. The sheer destruction of food production resources alone could have been expected to restrict output materially below pre-war levels for at least several years. By the end of the war, it was certain that large acreages of cropland would have been ravaged by shells, bombing, land mines, earthworks, the large scale passage of troops and vehicles, and by neglect. It could be foreseen that a substantial proportion of farm machinery and equipment would be worn out, destroyed or removed. Soil fertility could be expected to have declined sharply with the progressive reduction of needed fertilizer applications. There was every prospect that herds of food-producing and draft animals would continue to be depleted at an alarming rate. And one could reasonably expect also that the enormous population transfers effected during the war would leave many farms untenanted or undermanned for a considerable period.

The outlook for food production in liberated areas was rendered even grimmer by the momentum of deteriorating production and marketing relationships engendered by occupation policies. Burdensome levies, exploitive price arrangements and onerous controls on distribution encouraged the under-production of cash crops, hoarding, and the growth of comprehensive black market arrangements. Unfortunately, there seemed to be little likelihood that liberation would be attended by so abrupt and

favorable a transformation of economic conditions as to ensure the immediate reversal of these tendencies. Spiralling inflation could be expected to continue at least for a time, along with transportation shortages, an inadequate supply of consumer goods to be exchanged for farm products, and a network of restrictive controls over economic activities. Inasmuch as such prospects were more likely to compound than to offset the depressing effect on output of curtailed production resources, any headlong expansion in the domestic harvest of foodstuffs and in their movement to urban centers seemed quite improbable.

In appraising the recuperative potentials of agriculture in liberated areas, attention had also to be given to the fact that constructive governmental policies would have to be developed in the midst of a comparatively frenzied struggle for national regeneration. There was ample historical warrant for assuming that heated efforts to formulate and to secure the adoption of new conceptions regarding the powers and responsibilities of the state and the rights of individuals and of private property would give rise to some measure of political turmoil and economic disorganization. The implication seemed clear that such concentration on fundamental issues would, in the short run at least, further retard agricultural recovery by delaying the advent of a carefully integrated and stable program for surmounting the complex of obstacles to maximum production.

The foregoing considerations, underlined by the realization that inadequate output, price inflation and political instability tend to reinforce one another, offered little support for the view that the extraordinary food import requirements of liberated areas would disappear within one year after the military victory of the allies. Nor were there more persuasive grounds for anticipating any sharp decrease in the import requirements of the United Kingdom, the Soviet Union and China, or of Germany and Japan, within a comparably brief period. Having been forcibly curtailed rather than expanded during the war, the food import requirements of the United Kingdom were more likely to rise than to decline further. In the case of the others mentioned, requirements could, indeed, be expected to decline with the progress of rehabilitation and reconstruction, but even the most hopeful estimates precluded the restoration of pre-war levels of production within less than two or three years. It was apparent, moreover, that any stinting of aid during the early post-liberation period would tend to prolong as well as to intensify such shortages by diminishing the available means of reviving production and trade in deficit areas.

In summarizing the outlook, one may well recall former President Herbert Hoover's far-sighted outline of prospective requirements in June 1943:

... we have pledged ourselves to hundreds of millions... that they will be rescued from the terrible famine which has been brought upon them by a monstrous enemy. Without this action, there will be no peace. We must realize that this food shortage will last for a minimum of four, and possibly six years. These are stupendous burdens.<sup>81</sup>

Equally memorable was Vice-President Henry A. Wallace's warning in October 1943:

We must remember that from 1918 to 1924 there was more misery and probably more lives lost in Europe than during the war itself. Lack of food was one of the root causes of the terrible evils of that day. In those days of hunger and revolution were planted the seeds of desperate totalitarianism which produced Mussolini and Hitler.<sup>82</sup>

Having reviewed the enormous scale of prospective requirements, the necessity for undertaking the utmost possible exertions in order to prevent the emergence of any serious gap between needs and supplies, and the general means of mobilizing agricultural resources so as to maximize resultant contributions, succeeding chapters will be devoted to an appraisal of the adequacy of wartime efforts to support such unprecedented burdens.

<sup>81</sup> From an address to the American Farm Bureau Federation, *New York Times*, June 9, 1943.

<sup>82</sup> From a speech delivered before a Food for Freedom Meeting in Cleveland on October 27, 1943. (Quotation from mimeographed copy.)



## **PART B**

### **AGRICULTURAL PRODUCTION IN THE UNITED STATES**





## CHAPTER III

### AGRICULTURAL OUTPUT

THE United States was obviously marked from the outset of the war for a major, and probably the leading, role in the mobilization and allocation of the United Nations' food resources. Moreover, this position carried with it the responsibility to set a forceful example by increasing heavily our relative contribution to total exportable supplies lest the zeal of other contributors should waver in the face of steadily mounting needs.

#### I. IMMEDIATE WARTIME PRODUCTION TASKS

Whereas food shortages in Britain, China and the Soviet Union were caused by the cutting off of important sources of supply as a result of enemy conquest and blockade, the mounting food burdens in this country were due primarily to the fact that wartime demands grew much more rapidly than total domestic production.

The United States has been an exporter of foodstuffs throughout its history, but the volume of this outflow had begun to decline prior to the first World War,<sup>1</sup> and this trend was resumed after 1919.<sup>2</sup> As shown in Table 3, during 1935-39, the only food products which were being exported in significant quantities were cured pork, lard, canned milk, wheat flour, rice and various categories of fruit, including citrus fruits, apples, and canned and dried fruits. Even among these, exports absorbed less than one-eighth of domestic production, except in the case of canned and dried fruits and rice. In the aggregate, exports accounted for only 2.6 percent of the average annual food disappearance in the U. S. during 1935-39.<sup>3</sup> This peacetime pattern of overseas shipments is a measure of the scale of readjustments which were rendered imperative during the war.

On the import side, oilseeds and vegetable oils, coffee and sugar represented 62-65 percent of the value of incoming food cargoes during 1938-40, with cacao beans, tea and bananas contributing an additional 14-16 percent.<sup>4</sup> Other foodstuffs received from abroad in significant

1 Taylor and Taylor, *World Trade in Agricultural Products*, p. 233.

2 Using average exports during the calendar years 1924-29 to represent 100, the index number of the quantity of U. S. agricultural exports, excluding cotton, computed for the 12 months beginning in July of each year indicated, declined from 149 in 1920 to about 100 during the mid-twenties, to 76 in 1930, and to 40 in 1935, rising subsequently to 70 in 1937 and 1938, only to decline again to about 35 in 1940. (*Agricultural Statistics—1942*, p. 540.)

3 *The National Food Situation*, Bureau of Agricultural Economics, January 1946, p. 7.

4 *Agricultural Statistics—1942*, pp. 538-9.

quantities included meat products, cheese, canned fruits and fruit juices and fresh vegetables. The security of our domestic consumption levels against possible wartime interruptions to our imports is evident from the fact that total shipments from overseas contributed an average of no more than 6.4 percent of this country's new supply of food each year during 1935-39;<sup>5</sup> moreover, most of these imports, with the exception of oil-seeds and vegetable oils, catered to wants that are largely expendable during an emergency.

TABLE 3

U.S. PRODUCTION, IMPORTS AND EXPORTS OF SELECTED FOODS, ANNUAL AVERAGE, 1935-39

Commodity	Unit (millions)	Production	Imports	Exports
Beef .....	lbs.	6,936	215	53
Pork, excluding lard .....	lbs.	7,337	47	142
Eggs .....	doz.	3,335	18	2
Butter, farm and factory .....	lbs.	2,170	9	7
Cheese, except full skim, cottage, pot and baker's .....	lbs.	669	57	4
Condensed and evaporated milk ....	lbs.	2,225	1	58
Dried whole milk and dried skim milk	lbs.	262	7	8
Lard and rendered pork fat, excluding quantity in manufactured products	lbs.	1,624	0	192
Margarine, shortening and other edible fats and oils (fat content) .....	lbs.	2,407	312	39
Citrus fruits, for fresh consumption ..	lbs.	6,870	25	562
Apples, commercial, for fresh con- sumption .....	lbs.	4,384	1	475
Other fruits, for fresh consumption ..	lbs.	4,807	3,101	222
Canned fruits (pack years) .....	lbs.	1,666	590	309
Canned fruit juices .....	lbs.	321	233	19
Dried fruits <sup>1</sup> .....	lbs.	1,111	62	409
Fresh vegetables .....	lbs.	12,449	236	113
Canned vegetables, commercial pack (pack years) .....	lbs.	4,084	67	55
Dry edible beans and peas, cleaned (crop year) <sup>1</sup> .....	lbs.	1,591	41	88
Sugar, raw value .....	lbs.	3,896	9,734	218
Wheat .....	bushels	759	15	54
Rice, rough (marketing year) .....	bushels	46.8	0.6	17.8

<sup>1</sup> Data supplied by Division of Statistical and Historical Research, Bureau of Agricultural Economics, January 30, 1946.

Source: *The National Food Situation*, July 1945, pp. 27-47.

War developments set U. S. agriculture three immediate major tasks: to compensate as far as possible for the curtailment of imports essential to an effective war economy; to expand total food production, especially in certain categories, sufficiently to fulfill the urgent requirements of the allies and our armed forces in addition to supplying domestic civilian needs; and to pursue both of these objectives with minimum demands

<sup>5</sup> *The National Food Situation*, January 1946, p. 7.

on manpower, manufacturing facilities and raw materials, in order to facilitate the functioning of other critical war industries.

Enemy action together with the multitude of competing demands for available merchant shipping reduced the volume of 1942 imports, as compared with 1941, by one-fourth in the case of coffee, and by 40-70 percent in the case of cacao beans, tea, bananas, spices, sugar and molasses, and fats and oils.<sup>6</sup> From the standpoint of essential needs, the most serious of these reductions was that of fats and oils, with that of sugar and molasses also warranting concern. Inasmuch as each of these more urgently needed products was being produced domestically prior to the war, the objective in this area was patently to intensify such efforts for the period of the emergency. Although more shipping was allocated for the import of foodstuffs during 1943, in consequence of which sharp increases were recorded in the import of grains, dry beans and peas, cacao beans, tea, coffee and sugar, the need for greater supplies of sugar and molasses and especially of fats and oils continued.<sup>7</sup>

As the second of these war-imposed tasks, the enormous scale of foreign requirements as well as the expanding needs of our military services required adjustments in U. S. agricultural production far overshadowing those necessitated by the curtailment of imports. Moreover, the difficulties of supplying such claimants were further aggravated by the heavy concentration of requests for meats, dairy products, eggs, fats and oils and processed fruits and vegetables. But except for cured pork, lard, condensed and evaporated milk, and dried fruits, as Table 3 shows, these preferred foodstuffs either had not been exported in substantial quantities by the United States during recent pre-war years or had actually been on a net import basis. Accordingly, it was necessary not only to expand the volume of food output, but to redirect food production so as to ensure that resultant increases among the array of farm products would be patterned as closely as possible in accordance with the most urgent foreign and domestic needs to be supplied.

6 "Table of imports (for consumption) of major food products into the U. S., calendar years 1941-44, (preliminary)," prepared by the Office of Foreign Agricultural Relations of the Department of Agriculture and presented in the *Congressional Record*, June 27, 1945, p. 6954.

7 1943 imports of grains and of dry beans and peas rose to several times their 1941 levels. Additional heavy increases brought imports of coffee within 2 percent of the 1941 level, and imports of tea and cacao beans within 17 percent of 1941 levels. Although imports of sugar in 1943 rose to within 10 percent of the 1941 mark, this gain was partially offset by the further decline in molasses imports, leaving 1943 receipts of the latter two-thirds below 1941. Unfortunately, there was no significant improvement in fats and oils imports. (*Ibid.*)

The expansion of total agricultural production and the restructuring of its composition were rendered still more difficult by agriculture's need to share the nation's extremely straitened supplies of manpower, manufacturing facilities, raw materials and transport with other top-priority war industries. The necessity of economizing such productive resources laid two additional responsibilities on farmers and agricultural mobilization officials: to minimize idleness and inefficiencies in the utilization of available supplies of such resources; and to shift an increasing proportion of such resources to the production of those farm products which were most rewarding in their yield of needed nutrients per unit of resources employed in their output.

Before proceeding further, it should be noted that the effects of wartime developments are appraised throughout the present study by comparison with 1940, rather than with the more commonly used base period 1935-39.<sup>8</sup> The chief consideration influencing this choice was a desire to focus as sharply as possible on the distinctive consequences of wartime measures rather than on the differences between wartime conditions and those which obtained during a recent pre-war period of comparable length. Given this specialized purpose, it was necessary to select a base period which would portray as accurately as possible the agricultural plant and the operating relationships with which we entered the period of mobilization. 1940 was chosen because it actually was the last year before war-oriented agricultural policies were introduced in this country,<sup>9</sup> because its weather was not extraordinary as compared with 1938 and 1939, and because most of the agricultural differences observable between 1940 and the preceding two years seem to be attributable primarily to the extension of government policies and economic trends which were already

8 The period 1935-39 was the standard base of reference in measuring the extent of wartime changes in almost all studies, administrative reports, speeches and news releases made available to the public by the Department of Agriculture and the War Food Administration during 1942-45. See the various "situation" periodicals of the Bureau of Agricultural Economics, annual editions of the *Agricultural Outlook Charts*, annual reports of the top administrative officials of these agencies, the testimony of such officials before Congressional committees, etc.

9 The first serious effort to encourage the expansion of agricultural production with a view to fulfilling war-induced increases in requirements may be dated as early as April 1941, when Secretary of Agriculture Claude R. Wickard offered a series of price incentives to stimulate the output of hogs, poultry and dairy products in a "Food for Defense" program. (*N. Y. Times*, April 14, 1941.) Official announcement of a new general policy of greater food production was not forthcoming until September 1941. The organized use of the Department of Agriculture's widespread field personnel to effect such changes was initiated only in November 1941 with the launching of the "Food for Freedom" drive.

well-rooted during those earlier years. In discussing agricultural problems with respect to which 1940 conditions were significantly deviate, reference will be made in the pages that follow to more appropriate base periods.

Most important of all in this connection, it should be borne in mind that the use of 1940 as the base period, instead of 1935-39, tends to reduce the extent of the advances hitherto credited to agricultural mobilization, especially in the realm of production. The different effects of these two base periods is explained by the fact that 1935-39 output was subject to extraordinary curtailment from two sources: first, the droughts of 1934 and 1936, which were the severest ever recorded domestically;<sup>10</sup> second, the national policy of deliberate and pronounced acreage restrictions on "soil-depleting" crops.

## 2. PRODUCTION POTENTIALS

The effectiveness of agricultural mobilization cannot be determined, even crudely, merely by whether resultant production exceeded or fell short of total foreign and domestic requirements for United States supplies, for the enormous scale of such requirements surpassed the utmost possible limits of domestic productive capacity. Results must, rather, be compared with practicable potentials, if the extent and character of shortcomings are to be appraised realistically.

Comprehensive studies of the wartime production capacity of American agriculture were initiated in March 1942 by the Bureau of Agricultural Economics, with the participation of other agencies associated with the Department of Agriculture, and continued during the following year. At first, these studies were directed primarily toward the limited objective of determining the "feasible" level of production attainable in 1943, and they included the basic premise, among others, that "current adjustments least likely to lead to serious post-war maladjustment will be given priority."<sup>11</sup> Only in 1943 was such work appropriately refocused

<sup>10</sup> "The years 1934 and 1936 witnessed the most severe droughts in the agricultural history of this nation. Droughts...together with the acreage adjustment programs of the A.A.A. [Agricultural Adjustment Administration] accounted for other dips in farm production...If we had not had droughts in the 1930's, the 1935-39 base period gross production for the United States would have been 4 to 5 percent higher, and the increase from the base period to 1944 would have been about 18 percent instead of 24 percent." Glen T. Barton and Martin R. Cooper, *Farm Production in War and Peace*, U. S. Department of Agriculture, mimeographed, December 1945, pp. 8, 10.

<sup>11</sup> United States Department of Agriculture in cooperation with State Agricultural Experiment Stations and Extension Services, *Agriculture's Wartime Production Capacity*, mimeographed, Washington, D. C., August 15, 1942, Part I, p. i. It should be noted that this report was prepared for administrative use by an interbureau committee of the

on "maximum" production capacity.

It was apparent from the outset that the gross volume of agricultural production could be increased, without changing the customary product composition of output, by expanding the total acreage in crops as well as the livestock population, and by increasing yields per acre and per animal unit; and these could be effected either by utilizing available labor, fertilizer, feed and other factors of production more efficiently, or by wider employment of the most productive seed strains, or by shifting crops to the regions best adapted to their production. It was also obvious that the foregoing gains could be augmented heavily by shifting productive resources in favor of those foods which yield the greatest output of needed nutrients per unit of scarce resources employed in their production. Consequently, the central task of the Bureau of Agricultural Economics and its cooperating agencies was to consider these general principles in relation to the characteristics of the domestic agricultural plant, and in relation to the content of total requirements, as a basis for determining the specific direction and extent of production adjustments to be encouraged in the interests of maximizing mobilization achievements.

In a joint report completed June 1, 1943,<sup>12</sup> the Bureau of Agricultural Economics and the Agricultural Research Administration suggested that

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Department to help guide farm production adjustments during the war. In submitting it to Secretary of Agriculture Claude R. Wickard, Dr. H. R. Tolley, Chief of the Bureau of Agricultural Economics, stated that, "This report, built literally from the ground up, is perhaps the most complete capacity estimate ever made of agriculture." (*Ibid.*, letter of transmittal, p. 2.) The major findings of this survey were published in an article by Sherman E. Johnson, Robert C. Tetro and Neil W. Johnson entitled, "Resources Available for Agricultural Production in 1943," *Journal of Farm Economics*, February 1943, especially pp. 67, 69.

12 U. S. Department of Agriculture, *Maximum Wartime Production Capacity of American Agriculture*, mimeographed, June 1, 1943. Prepared for administrative use by a committee composed of representatives of the Bureau of Agricultural Economics and the Agricultural Research Administration, this report was a revision by agricultural scientists as well as farm management experts and economists of an earlier draft with the same title and general contents which had been completed by the Bureau of Agricultural Economics alone two months previously and which had in turn been based in part on the comprehensive report of August 1942 cited immediately above. Most of the major conclusions of the June report were published in an article by Sherman E. Johnson, entitled, "Food Production Policies in Wartime", *Journal of Farm Economics*, August 1943, especially pp. 549-53.

Other estimates of the maximum productive capacity of agriculture during the war were prepared by the Subcommittee on U. S. Food Allocations Policy of the Interdepartmental Food Advisory Committee to the Secretary of Agriculture (*Fundamentals of a Wartime Food Program*, mimeographed, Washington, D. C., July 1943), by the Department of Agriculture "in co-operation with the Land Grant Colleges and other agencies in each of the 48 states" (*Agriculture's Maximum Wartime Production*

the following adjustments would probably be necessary if "the fullest possible output in terms of balanced food values is to be obtained from farm production sources:"<sup>13</sup>

1. A shift in consumption "toward more of certain crop products and dairy products on the one hand and less of meat products and animal fats on the other;"<sup>14</sup>
2. Increasing the total acreage in crops by more than 25 million acres through equivalent reductions in the land then idle, fallow or in plowable pasture;<sup>15</sup>
3. Increasing the proportion of total cropland devoted to the most efficient and most essential crops by reducing the acreage of cotton and tobacco by about one-sixth, by an 11 percent reduction in the acreage of oats, and by reducing the acreage of sugar beets by more than two-fifths when sufficient shipping became available to import the equivalent quantities of sugar from Cuba;<sup>16</sup>
4. Increasing the acreage of food crops "to the maximum extent consistent with both production possibilities and needs" by more than doubling the acreage of peanuts, sweet potatoes, and dry beans and peas, and by increases of almost half in the acreage devoted to Irish potatoes, vegetables for fresh markets and processing, and soybeans;<sup>17</sup>
5. Utilizing most of the remaining increase in cropland to expand the acreage of wheat, corn and alfalfa hay in the areas best suited to their production, thus increasing the acreage of wheat by one-fourth, alfalfa by one-fifth and corn by about one-twelfth;<sup>18</sup>
6. Reducing the production, compared with 1942, of hogs by 10 percent, sheep and lambs by 5 percent, and chickens and broilers by less than 2 percent, while increasing the production of cattle and calves by less than 5 percent, of milk by slightly over 6 percent, and of eggs by about 15 percent.<sup>19</sup>

In developing this program of adjustments, it was assumed "that labor, machinery and equipment would not be limiting factors." This was

*Capacity*, mimeographed, August 1943), and by the War Food Administrator (*Food Program for 1944*, U. S. Government Printing Office, February 1944, pp. 15-18).

For a detailed comparison of these various estimates, see section 4 of chapter IV and section 3 of chapter V.

<sup>13</sup> *Maximum Wartime Production Capacity of American Agriculture*, June 1, 1943, title page.

<sup>14</sup> *Ibid.*, p. 1.

<sup>15</sup> *Ibid.*, p. 4.

<sup>16</sup> *Ibid.*, pp. 6, 10.

<sup>17</sup> *Ibid.*, pp. 5, 6.

<sup>18</sup> *Ibid.*, pp. 5, 6.

<sup>19</sup> *Ibid.*, p. 40.



recognized to imply "the more complete utilization of idle time and equipment as well as provision for additional labor and equipment when needed." No specific estimates of the possible need for additional machinery were presented in the report.<sup>20</sup> With regard to labor, it was estimated that, "less than 100,000 additional year-round workers would be needed [compared with 1942] . . . and that, "the seasonal working force would need to be augmented by 200,000-400,000 workers during the months from April to July and in September and November, . . . [by] 600,000 in October . . . [and by] 75,000 in August."<sup>21</sup> In view of the extent of the proposed adjustments, two years—from the summer of 1943—were considered necessary to achieve the complete program. Thus, maximum production might have been achieved in 1945 even if energetic efforts toward that end had not been initiated until the latter half of 1943.<sup>22</sup>

Total agricultural production for sale and home consumption at maximum capacity was estimated at 19 percent above actual production in 1940 and at 6 percent above actual production in 1942.<sup>23</sup> Lest this increment be considered unduly modest, it should be noted that the estimate of maximum production was based on the assumption of only normal crop yields, and that, given normal crop yields, production in 1942 would have been only 8 percent larger than in 1940.<sup>24</sup> However, the objective of these proposed adjustments was not only to increase the total volume of production, but to effect even greater increases in the food components of agricultural production. Accordingly, it was estimated that, at maximum capacity, total food production for sale and home consumption would be 22 percent greater than in 1940, while production in 1942, at normal crop yields again, would have been only about 7 percent larger

<sup>20</sup> In this connection, the report of the Subcommittee on U. S. Food Allocations Policy states that, "Some additional machinery, largely in such special types as combines for soybeans and peanut pickers, would be needed." (*Op. cit.*, p. ii.) On the other hand, the "broad" study of production capacity completed in August 1943, and based on the participation of state and some local officials in all 48 states, made its capacity estimates on the assumption that, "twice as much materials [would be available] to make farm machinery for 1944 as were available for 1943." (*Op. cit.*, Part II, Foreword.)

<sup>21</sup> *Maximum Wartime Production Capacity of American Agriculture*, June 1, 1943, pp. 2, 4.

<sup>22</sup> This same period is also assumed in both of the other reports: *Fundamentals of a Wartime Food Program*, Charts 2 and 3, immediately following p. 18; *Agriculture's Maximum Wartime Production Capacity*, August 1943, Part II, Foreword.

<sup>23</sup> *Maximum Wartime Production Capacity of American Agriculture*, June 1, 1943, p. 46.

<sup>24</sup> *Agriculture's Wartime Production Capacity*, August 15, 1942, letter of transmittal.



than in 1940.<sup>25</sup> Nevertheless, even the gain in the volume of food production has serious shortcomings as a measure of progress toward all-out mobilization.

Inasmuch as the objective of the proposed program was to obtain the "fullest possible output in terms of balanced food values," its benefits could be assessed thoroughly only by measures focussed on the nutritional content of total production rather than on its physical volume alone. Comparison of the average production of each nutrient during 1941 and 1942 with its estimated production at maximum capacity reveals the impressive fact that under the latter program enough more food would have been produced annually in the United States to supply a complete and reasonably well-balanced diet for at least 40 million additional people and to supply large supplements of proteins, fats, minerals, and certain vitamins for many millions more.<sup>26</sup>

The foregoing proposals encompassed the expansion of acreage in crops, shifts in the proportion of such cropland allocated to various crops, and shifts in the division of available feed supplies among the various categories of livestock. Still another source of major production gains—increased yields per acre—remained to be considered, however, if a thoroughgoing program of agricultural mobilization was to be formulated. Addressing itself to the determination of potentials in this area, a joint committee of the Bureau of Plant Industry and the Bureau of Agricultural Economics reported that:

there are very important possibilities of increasing crop yields through the wider adoption of improved practices... [including] the wider use of improved varieties, adequate fertilization and liming,... improved methods and rates of seeding, time of harvesting, controlled grazing, disease and insect control and a variety of other means of increasing yields, differing between crops and regions.<sup>27</sup>

After reviewing the possible gains for each major crop category, the report concluded that, "... if a strong wartime practice improvement program were undertaken by departmental and State agencies and backed up with adequate financial support and education,... it is estimated that [by 1945] the total volume of food production might be increased by

<sup>25</sup> *Maximum Wartime Production Capacity of American Agriculture*, June 1, 1943, p. 46.

<sup>26</sup> *Ibid.*, p. 46.

<sup>27</sup> *Ibid.*, p. 47.

5 to 10 per cent above the maximum production previously indicated.”<sup>28</sup> That these findings tend to be cautious rather than extravagant is evident from the fact that, “estimates of physical possibilities within the physical limitations of available materials [were adjusted by the joint committee] to a ‘realistic’ basis of what could be achieved in view of farmer psychology and resistance to change in short periods of time.”<sup>29</sup> It should also be noted that these estimates still assumed only “normal” weather, rather than anything like the extraordinarily favorable conditions which were actually experienced in 1942.

Adding the prospective gains from higher crop yields to the increases anticipated from the crop adjustments considered earlier, agriculture was apparently deemed capable of exceeding its 1940 production levels under normal weather conditions by 25-30 percent in the case of total production for sale and home consumption and by 28-33 percent in the case of food production for sale and home consumption. In terms of a balanced supply of nutrients, agriculture was regarded as capable of producing enough more than its average output during 1941 and 1942 to feed an additional 48-57 million people annually at the comparatively ample levels recommended as essential to vigorous health by the National Research Council. The significance of this estimate is further heightened by the fact that food aid programs never contemplated the provision of more than one-fourth to one-third of dietary requirements to any claimant nation over any extended period. Consequently, the additional output which was considered to be attainable at maximum capacity would have been sufficient to provide more than 150 million people annually with ration supplements sufficient to raise their consumption levels to the minimum standards deemed necessary to maintain health.

From the standpoint of developing a wartime food strategy to guide the planning of detailed adjustments, perhaps the most significant outcome of the foregoing studies of production potentials was that thoroughly qualified officials of the Department of Agriculture were in general agreement that enormous potentials for increasing the production of life-saving foodstuffs lay within practicable, if not easy, reach of American agriculture; and also that they agreed on the broad categories of production adjustments whereby such output might have been maximized. In that perspective of agreement on fundamentals, differences in what were termed “preliminary” estimates of how far selected adjustments could advantageously be carried or how large the resultant gains in out-

<sup>28</sup> *Ibid.*, p. 49.

<sup>29</sup> *Ibid.*, footnote to Table 34, p. 47.

put would be were essentially of secondary importance; for they were based almost without exception not on disagreements relative to physical potentialities but rather on varying judgments of how much would really be needed and of the extent to which economic, psychological or other non-agronomic considerations would interfere with the attainment of production potentials. Inasmuch as no serious technical challenge was offered either to the general scale of production potentials considered above, or to the desirability of promoting the major adjustments involved to whatever degree was justified by threats of serious food deficits, these will be used as the basis for appraising the adequacy of the production results which actually materialized.

### 3. PRODUCTION RESULTS

With the approach of hostilities, agriculture joined other war industries in the march toward production levels which would surpass all previous peaks, but its pace was slower, the duration of its upsurge shorter and, hence, its accomplishments less extraordinary than were achieved by most of the others.<sup>30</sup>

#### *Total Production*

Table 4 reveals that the annual volume of gross farm production—including the output of fields, pastures, orchards, meat animals and their products, and also the contribution of farm power by horses and mules—increased by only 15 percent between 1940 and the end of the war. Almost the whole of this gain had been achieved by the end of 1942, as the result of a rise of 4 percent in 1941 and of a further increment of 10 percent during the following year. Thereafter, gross farm production declined in 1943, only to rise again during each of the last two years of the war to less than 2 percent above the 1942 level. Such limited advances meant that total agricultural production not only fell short of requirements; it even fell considerably short of feasible production potentials.

As a first step toward penetrating beneath the aggregate wartime changes in gross farm production which have been noted, attention is directed to the variations experienced by its three major components:

<sup>30</sup> Of the indices of production in well over 100 industries prepared and published by the Federal Reserve Board, the only ones which failed to record a greater expansion than was achieved by agriculture during the war were: one major category, lumber, and about one dozen relatively minor and less essential categories, including confectionery, whiskey, cigars, gold, plate glass and printing and publishing. (*Federal Reserve Bulletin*, Federal Reserve Board, October 1943, pp. 964-84; March 1945, pp. 264-5; April 1946, pp. 422-3.)

crop and pasture production, including fruits and tree nuts; product added by meat animals and animal products; and product added by horses and mules in the form of farm-produced power. In 1940, the first of these contributed about 72 percent of gross farm production, while the second and third added about 24 percent and 4 percent, respectively.<sup>31</sup>

Production trends in these major categories during 1940-43 actually represented a continuation rather than a sharp re-orientation of pre-war patterns. Between 1920 and 1940, the product added by horses and mules declined by 45 percent as a result of the steady shift from animal to mechanical power on farms. At the same time, the product added by meat animals and animal products was rising with reasonable steadiness, except for 1933-36, to reach a level 36 percent above its starting point. Crop and pasture production was characterized by more pronounced fluctuations, being more directly responsive to weather variations, and also by a barely perceptible upward trend.<sup>32</sup> During 1940-43, as shown in Table 4, product added by horses and mules continued to decline,

TABLE 4  
CHANGES IN THE VOLUME OF AGRICULTURAL PRODUCTION, TOTAL AND  
MAJOR COMPONENTS, 1940-45  
Index Numbers (1940 = 100)

Production categories	1940	1941	1942	1943	1944 <sup>1</sup>	1945 <sup>2</sup>
Gross Farm Production .....	100	104	114	111	116	115
Crop and pasture production .....	100	103	113	107	114	112
Product added by meat animals and animal products .....	100	106	116	126	124	125
Product added by horses and mules .....	100	97	94	91	88	85
Farm Output for Human Use <sup>3</sup> .....	100	105	116	114	118	117

<sup>1</sup> Preliminary.

<sup>2</sup> Preliminary estimate based largely on Dec. 1945 report of Crop Reporting Board.

<sup>3</sup> Gross farm production less the product added by horses and mules.

Source: Barton and Cooper, *Farm Production in War and Peace*, p. 74.

although somewhat more rapidly than before. Product added by meat animals and animal products continued to rise, also more sharply than during the interwar period. Crop and pasture production, too, continued to fluctuate more markedly than the others and also to expand—though at a somewhat accelerated pace. But during the last two years of the war, only the decline in farm-produced power continued as before; crop production and the product added by meat animals and animal products both leveled off.

<sup>31</sup> Except for slight changes due to the trends discussed in the succeeding paragraph of the text, these ratios were the same as the averages for 1935-39. (Barton and Cooper, *op. cit.*, pp. 24, 27.)

<sup>32</sup> *Ibid.*, p. 74.

One other summary measure of the volume of agricultural production which is of particular interest is the volume of farm output available for human use. This quantity is computed by subtracting the output represented by farm-produced power, including feed for horses and mules as well as their absorption of the product of other farm resources, from gross farm production. The trend of farm output for human use rose more rapidly than gross farm production during the war as well as prior to it, both because farm-produced power has been declining steadily for decades and because the productive resources thereby released have been shifted over to production for human use.<sup>33</sup>

Thus, the outstanding feature of total agricultural production during 1940-45 was that it had virtually reached its wartime peak during the very first year after this country's entrance into the war. Moreover, this 1942 record was only 14 percent greater than production in 1940, when acreage restriction was still a dominant element in national agricultural policy. It was also significant that total livestock products, excluding farm-produced power, had increased more than twice as much as crop and pasture production by the end of 1943, thus foreshadowing the difficulties in redressing the balance of the agricultural economy which grew to such prominence during 1944 and 1945.

### *Crop Production*

The rise in the index of crop and pasture production from 100 in 1940 to 113 in 1942 and its continuance at that level, after recovering from a decline to 107 in 1943, was the resultant of quite diverse trends among its major components. During 1941-43, for example, the production of food grains, fruits and tree nuts, and sugar crops declined, while the production of feed grains, oil crops and vegetables other than truck crops rose rapidly. Similarly, during the last two years of the war, the production of cotton and of vegetables other than truck crops decreased substantially, while the production of tobacco and of food grains turned sharply upward.

A characteristic of pre-war agriculture in the United States which proved highly significant during the war was the dominance of crop production by feedstuffs for livestock. In 1940, livestock feed accounted for approximately one-half of total crop and pasture production, food crops for only 30 percent, cotton and tobacco for an additional 15 percent,

<sup>33</sup> "Between 1915 and 1939, motor equipment displaced nearly 10 million horses and mules on farms. This reduction of work stock released, either for direct sale or for the feeding of other livestock, the products of some 30 million acres of crop land and 15 million acres of pasture." (U. S. Department of Agriculture, *Technology on the Farm*, U. S. Government Printing Office, August 1940, p. 44.)

and oil-bearing crops for about 2 percent. Although heavy food requirements abroad rendered it particularly urgent that the production of food crops be expanded, and although substantial shifts did take place in the relative contributions of cotton, tobacco and oil crops, there was little change in the relative proportions accounted for by feedstuffs and by food crops—the former remained more than half again as large as the latter throughout 1940-45.<sup>34</sup>

Except for the years of recovery directly following droughts, the 16 percent rise in the production of livestock feed between 1940 and 1942 was larger than that in any comparable period during the inter-war years. From its wartime peak in 1942, the production of feed grains, hay and pasture declined by 5 percent during the following year and rose thereafter to midway between the 1942 and 1943 levels.<sup>35</sup>

Food grains accounted for almost one-third of total food crop production in 1940, truck crops for somewhat more than one-fourth, fruits and tree nuts for one-fifth, vegetables other than truck crops for one-sixth and sugar crops for the less than five percent remaining.<sup>36</sup> As shown in Table 5, the largest of these components, food grains, also experienced the most spectacular succession of ups and downs during the war: rising 19 percent between 1940 and 1942, yielding almost all of this gain in 1943, and then rebounding to 30 percent above its 1940 level in 1944, before extending this advance by a few percent during the following year. Truck crops, too, reached successively higher peaks in 1944 and 1945, although only half as high as those attained by food grains, and only after a period of comparative immobility during 1940-43. The production of vegetables other than truck crops grew larger each year during 1940-43, and then lost two-thirds of the resulting increment during 1944 and 1945. The wartime peak in the production of fruits and tree nuts came in 1941, to be followed by a two year decline, a sudden and short-lived spurt in 1944, and a return to only 2 percent above its 1940 level in 1945. Sugar crop production was the most variable of all five categories of food

34 Barton and Cooper, *op. cit.*, p. 27. Incidentally, although the terms "food crops" and "feed crops" are convenient and common designations, they are not entirely precise. For example, both corn and wheat, classed as feed and food crops respectively, are diverted in substantial quantities to industrial uses; and wheat is also diverted to livestock feed.

35 For production of feed grains and hay, see U. S. Department of Agriculture, *Crop Production—Annual Summary for 1945*, December 18, 1945, mimeographed, pp. 35-36. For special estimates of hay and pasture production, see Barton and Cooper, *op. cit.*, p. 29.

In 1940, corn accounted for 42 percent of total livestock feed production, hay and pasture for an equal proportion, and other feed grains for the remainder. (*Ibid.*, p. 29.)

36 *Ibid.*, p. 30.

crops: declining by 5 percent in 1941, rising by 14 percent in 1942, dropping by 27 percent in 1943, and maintaining that level for another year before rising in 1945 to only 7 percent below its starting point.

TABLE 5  
CHANGES IN THE VOLUME OF CROP AND PASTURE PRODUCTION, 1940-45  
Index Numbers (1940=100)

Production categories	1940	1941	1942	1943	1944 <sup>1</sup>	1945 <sup>2</sup>
Feed grains, hay and pasture .....	100	104	116	110	113	113
Food grains .....	100	113	119	102	130	135
Truck crops .....	100	102	106	101	113	118
Vegetables other than truck crops .....	100	101	106	129	108	111
Fruits and tree nuts .....	100	114	109	95	110	102
Sugar crops .....	100	95	108	79	80	93
Cotton .....	100	84	101	91	98	73
Tobacco .....	100	86	97	97	127	133
Oil-bearing crops .....	100	110	176	186	160	171
Total crop and pasture production <sup>3</sup> .....	100	103	113	107	114	112

<sup>1</sup> Preliminary.

<sup>2</sup> Preliminary estimate based largely on December 1945 report of Crop Reporting Board.

<sup>3</sup> Includes some miscellaneous crops not included in separate crop groups shown.

Source: Barton and Cooper, *Farm Production in War and Peace*, p. 74.

Closer scrutiny of the spectacular increase of 86 percent in the production of oil-bearing crops during 1940-43 reveals that most of this advance was concentrated in one year, 1942, and was attributable to one crop, soybeans. In 1942, peanut production was one-fourth greater than in 1940, flaxseed production was one-third greater than in 1940, and soybean production rose to almost two-and-one-half times its 1940 level. Thereafter, both soybean production and peanut production hovered within five percent of their 1942 records for the remainder of the war. Flaxseed production rose substantially during 1943 but most of this increment was transitory indeed, for such production declined by 55 percent in the very next year and regained only half this loss in 1945. It might also be noted that the production of cottonseed dropped and rose alternately during 1940-45, but was higher in 1940 than in any subsequent year.<sup>37</sup>

With the exception of the extraordinary year 1937,<sup>38</sup> more cotton was grown in 1940 than in any previous year since 1933. Production de-

<sup>37</sup> For more detailed data on the production of soybeans, peanuts, flaxseed and cottonseed, see U. S. Department of Agriculture, *Agricultural Outlook Charts—1946*, mimeographed, December 1945, pp. 64-67.

<sup>38</sup> As a result of most extraordinary growing conditions, the average yield of cotton per acre in 1937 was one-fourth greater than the previous peak of 1914, and total production was the greatest on record. (*Agricultural Statistics—1942*, p. 100.)

creased by 16 percent in 1941 and then rose again in 1942 to surpass the 1940 level by one percent. As a result of similar fluctuations during the next three years, its average annual production during 1940-44 was about equal to what it had been in 1938 and 1939, i. e., about 5 percent below the 1940 level. Inclusion of 1945 as well would reduce this average to 9 percent below the 1940 level.

The 1940 tobacco crop was the third largest since 1932, having been exceeded only in 1937 and in 1939. After a reduction of 14 percent in 1941, tobacco production recovered to within 3 percent of the 1940 level in 1942, remained virtually unchanged in 1943, and mounted sharply during the next two years to reach a level at the end of the war one-third higher than in 1940, and above any previous record. Thus, even the average production during 1940-43 exceeded annual output levels in every year since 1932 except for 1937 and 1939.

In summarizing crop production developments during 1940-45, the following stand out as significant highlights:

1. The upward thrust of crop production was virtually exhausted by the end of 1942, although the urgent needs which it sought to fulfill continued to rise rapidly thereafter;
2. The heavy preponderance of animal feedstuffs production, as compared with food crops, was actually increased during the early years of the war and was only reduced to its original dominant proportions of 1940 by the end of the war;
3. Progress in compensating for import curtailments was mixed, with the production of oil-bearing crops rising further than any other major category during the war, and with the production of sugar crops declining further during 1942-44, the period of greatest need, than any other major crop.

### *Livestock Production*

It has already been noted that farm-produced power declined uninterruptedly during the two decades ending in 1940, and continued to do so during the war, while livestock production for human use, i. e., the total minus farm-produced power, increased by one-third during the inter-war period, expanded one-fourth beyond its 1940 level by the end of 1943, and then remained at this peak for the succeeding two years.

Livestock production for human use is composed of meat animals, dairy products, poultry products, and wool and mohair. Annual production rose substantially in each of these categories between 1920 and 1940, by one-fourth in the case of meat animals, by two-fifths in the case of dairy products, by half in the case of wool, by slightly more than half in the case of poultry products, and by almost 150 percent in the case



of mohair.<sup>39</sup> In 1940, meat animals accounted for about 45 percent of the total volume of livestock production for human use and attendant feed consumption, dairy products for about one-third, poultry products for one-fifth, and wool and mohair for the slight remainder.<sup>40</sup>

As shown in Table 6, production changes among the components of livestock production for human use did not adhere to the pre-war patterns during 1940-43. The pacesetting growth of wool and mohair production was curtailed abruptly and soon reversed: its rise ended in 1942, less than 5 percent above the 1940 level, and its decline began in 1943, becoming increasingly precipitous during the next two years.<sup>41</sup> Despite the particularly urgent need for dairy products, their production increased by only 10 percent during 1940-42, and even slipped back slightly the following year. On the other hand, the growth of meat animal production, which had lagged behind the others during most of the inter-war period, began a spurt in 1938 which carried on through 1943, raising output by one-third during the last three years—or by more than during the 20 years beginning in 1920. Poultry production alone maintained its pre-war relationship to the others, reaching a record peak in 1943 more than two-fifths above its 1940 level.

TABLE 6  
CHANGES IN THE VOLUME OF MEAT, DAIRY AND POULTRY PRODUCTION, 1940-45  
Index numbers (1940 = 100)

Production categories	1940	1941	1942	1943	1944 <sup>1</sup>	1945 <sup>1</sup>
All livestock production excluding farm-produced power .....	100	106	116	126	124	125
Meat animals, including feed consumed <sup>2</sup>	100	105	120	135	120	118
Dairy products, including feed consumed <sup>2</sup>	100	105	110	109	111	114
Poultry products, including feed consumed <sup>2</sup> .....	100	110	126	144	141	145

<sup>1</sup> Preliminary.

<sup>2</sup> Combined volume of livestock production and feed consumed.

Source: Barton and Cooper, *op. cit.*, pp. 28, 74. Also related unpublished data supplied by Mr. Barton, April 1946.

The wartime upsurge in livestock production for human use reached its peak in 1943, but output then remained at that level for the duration of the war instead of receding significantly as was commonly thought to be the case. The production of dairy products did rise by almost 5 percent

<sup>39</sup> For data on wool and mohair production during 1920-40, see *Agricultural Situation—1942*, pp. 431, 442. For trends of other commodities, see Barton and Cooper, *op. cit.*, p. 28.

<sup>40</sup> Barton and Cooper, *op. cit.*, p. 28.

<sup>41</sup> For wartime production of wool, see *Agricultural Outlook Charts—1946*, p. 58. For data on mohair production, see *Agricultural Statistics—1944*, p. 325.

during the last two years of the war, but poultry production merely fluctuated about its 1943 peak, and the production of meat animals and of animal fibers declined substantially. The two most noteworthy developments in this sector of production were: first, that compared with crop production, livestock production for human use increased by twice as much during 1940-43, and retained twice as large an increment during 1944 and 1945; second, that compared with inter-war trends, production during 1940-43 involved substantially heavier emphasis on meat animals and comparatively lesser emphasis on dairy production.

#### 4. THE GAP BETWEEN PRODUCTION POTENTIALS AND RESULTS

Although the above program for maximizing the production of needed foodstuffs was prepared in 1943 and hence had to be focussed on the succeeding two or three years, it was formulated in accordance with the very same basic principles which would necessarily have been the core of such a program even if the Department of Agriculture had been alert enough to initiate such planning a year or two earlier. Thus, the proposed shifts from meat to dairy products and certain crops, from animal fats to vegetable oils, and correlative adjustments in feed production and allocations would have been no less appropriate for maximizing progress toward mobilization objectives during 1942 and 1943. The same may be said of the proposed shifts from cotton and tobacco to more urgently needed crops, and for the recommended shift to those food crops which yield the largest output of needed nutrients per unit of scarce production resources. Indeed, only the proposal to reduce sugar beet acreage after 1943 would not have been appropriate earlier, inasmuch as it presupposed the availability of enough more shipping to bring in an equivalent increase in Cuban sugar.

On the other hand, the *extent* of the production changes proposed in 1943 were in most cases curtailed, relative to what might have been proposed earlier, by the momentum of increasing maladjustments which had developed during 1941-43. In view of the rapid increase in the production of cattle and calves during 1942 and 1943, the only immediate alternative to proposing impracticable levels of slaughter was the limitation of further such increases; but this involved acceptance of a higher level of cattle and calves production than would have been projected late in 1941 under the principle of shifting production from meat to dairy and crop substitutes. Similarly, a substantially larger increase in milk production and in the number of milk cows might have been proposed in 1941 than seemed feasible in 1943—after price relationships had been altered to the comparative disadvantage of dairy production, and after the

substantial increase in the population of livestock other than milk cows had come to press so heavily on available feed supplies as to preclude extreme shifts in the allocation of feeds in favor of dairy production. The heavy feeding commitments resulting from having permitted the livestock population to swell to such unprecedented proportions explains why feed crop production represents another example of where greater shifts toward production for direct human consumption might have been proposed at the outset of the war than were considered feasible in 1943. Earlier, it might also have been considered practicable to adopt the proposal put forward tentatively by the Bureau of Agricultural Economics in March 1943, but omitted from the later report of the same name prepared jointly with the Agricultural Research Administration, whereby approximately 1,450,000 acres would have been released for urgently needed foodstuffs by completely eliminating the production of buckwheat, sweet corn, watermelons, canteloupes, asparagus, cucumbers and some twenty other minor crops deemed not essential to the war effort.<sup>42</sup>

One may reasonably conclude, therefore, that the adjustments proposed in 1943 constituted but a limited version of the shifts which might have been considered feasible if planning for all-out agricultural mobilization had been initiated earlier.

The primary means of expanding the output of agriculture, as has been noted, were to increase the volume of such production—through devoting more acreage to growing crops and through raising average yields per acre—and to re-arrange the internal composition of such production so as to maximize the output of needed nutrients. And as between these two, the latter was deemed capable of the greater contributions. As a matter of fact, actual performance fell substantially short of estimated potentials at each of these points; but shortcomings were most serious of all in respect to altering the composition of output.

Perhaps the most creditable aspect of changes in agricultural production during 1940-43 from the standpoint of mobilization objectives was the expansion of its physical volume. Between 1940 and 1942, gross farm production rose by 14 percent and farm output for human use (gross farm production minus farm-produced power) rose by 16 percent. Even

<sup>42</sup> "A long list of minor crops was examined and non-essential ratings assigned to those that might be considered dispensable in an all-out production effort... [As] a first approximation . . . the following crops were completely taken out: artichokes, asparagus, beets, cauliflower, celery (white), lettuce, cucumbers, cantaloupes, watermelons, pimientos, hops, popcorn, eggplant, endive, parsnips, rhubarb, radishes, mustard, squash (white fleshed), garlic and leeks, kohlrabi, horseradish, buckwheat, sweet corn, cranberries, peppermint, spearmint, chicory." (Bureau of Agricultural Economics, *Maximum Wartime Production Capacity of American Agriculture*, Preliminary, mimeographed, March 31, 1943, p. 3.)

if the contribution of extraordinarily favorable weather to this increase is estimated at no more than one-third,<sup>43</sup> the resulting increases would have been only 9 percent for gross farm production and 11 percent for farm output for human use, compared with estimated maximum potential gains under normal weather conditions of 25-30 percent for the former and 28-33 percent for the latter.<sup>44</sup> Moreover, the succeeding three years witnessed little further progress toward capacity levels. The war-time peak, which came for both of these indices in 1944, once more as the result of extraordinarily favorable weather,<sup>45</sup> exceeded the 1942 records by only 2 percent. In short, even in terms of sheer physical volume of

43 Comparison of average crop yields in 1942 with the 1937-41 average, which was officially considered to approximate "normal" for wartime planning purposes (*Maximum Wartime Production Capacity of American Agriculture*, June 1, 1943, p. 47), suggests even more generous estimates of the contribution to 1942 production attributable to extraordinarily favorable weather. Thus, although the weather in 1943 was considered "slightly above average" (See footnote 45 below), average crop yields were only 4 percent above "normal." In 1942, average crop yields were 15 per cent above "normal," and almost 15 percent above 1940 levels as well—thus accounting for virtually the whole of the gain in crop and pasture production between 1940 and 1942. (See Barton and Cooper, *op. cit.*, p. 84; also Table 8 in Chapter IV.)

44 The major differences between the index of the volume of agricultural production for sale and home consumption, referred to in the above discussion of production potentials, and the index of total farm output are:

1. "The farm-output index credits farm-produced feed in the calendar year in which it was produced. The sale-and-consumption index credits this feed indirectly in the form of livestock production in the year fed, which is usually a year after it is produced.
2. "The livestock sales-and-consumption data used in the sales-and-consumption index have not been corrected for inventory changes in livestock. The data regarding livestock production used in the farm-output index are 'net' for the calendar year.
3. "Through the use of crop sales data in the sales-and-consumption index, some feed-crop production is counted twice—once when sold from one farmer to another, and again when 'sold' through livestock. Similarly, some feeder livestock are counted twice—once when sold as feeders and again when sold as finished livestock.
4. "Feed imports into the U. S., as well as all commercial feeds, are credited to livestock production in the sale-and-consumption index. An adjustment has been made for all feed and pasture consumed in calculating product added in the farm-output index...."

"After these adjustments have been made..., the sales-and-consumption index differs very little from the farm-output index." (Barton and Cooper, *op. cit.*, pp. 68-69.)

45 "Growing conditions in 1942 were more favorable than for any recent year. They were less favorable in 1943 but still slightly above average. In 1944, despite the unsatisfactory beginning, they averaged about mid-way between the two previous years." (From an address by J. B. Hutson, President of the Commodity Credit Corporation and Director of Production, War Food Administration, at the Extension Section of the meeting of the Association of Land Grant Colleges and Universities in Chicago, October 24, 1944.)

output, without regard to the extent of shifts to the more essential and more efficient products, agricultural production was expanded only about one-half as much as had been deemed practicable and urgent.

Although shortcomings in performance relative to estimated potentials are more fully explored in the following chapters, it may help to round out the present discussion to highlight some of these later findings. For example, the peak wartime increase in crop acreage was only about one-half of the maximum increment considered to be attainable. Wartime gains in average crop yields per acre—other than those attributable to abnormally favorable weather, and hence hardly a product of mobilization policies—approximated between one-half and two-thirds of estimated feasible potentials. Intensive analysis of crop acreage adjustments leads to the conclusion that the patterning of actual changes during the war failed to reflect the influence of any coherent plan for reducing the acreage devoted to the relatively more dispensable crops in order to expand the acreage of those capable of larger contributions to the fulfillment of urgent requirements. Thus, in 1945—by which year enough time had elapsed to have permitted full attainment of maximum potentials—13 of the 15 crops for which acreage increases had been recommended actually occupied acreages which were either smaller than in 1942 or which exceeded the 1942 level by less than 25 percent of the lowest of the several estimates of acreage expansion potentials which were put forward. Substantial shortcomings were also recorded in progress both toward reducing the proportion of agricultural resources allocated to livestock production and toward altering the distribution of such resources among alternative livestock enterprises.

Increases in agricultural production during 1940-45 constituted a substantial contribution to the war effort, but one hardly commensurate with the heroic demands of the emergency. Production results pale, of course, before such an estimate of prospective needs as was presented to a Congressional committee by Assistant Secretary of Agriculture Grover B. Hill in April 1943, "Regardless of how much food we will produce, it will not be enough. Even though we could produce twice as much as we will be able to produce, we could use it all. We have an insatiable demand from our allies for food."<sup>46</sup> But evidences of inadequacy relative

<sup>46</sup> U. S. House of Representatives, Appropriations Committee, *Hearings on Interior Department Appropriation Bill, 1944*, U. S. Government Printing Office, April 14, 1943, p. 989-90. Also see his testimony in *Senate Hearings Investigating the National Defense Program*, Part 17, p. 6,777.

to such formless and hopelessly engulfing estimates of need are less significant in assessing the effectiveness of mobilization efforts than a comparison of actual results with realistically detailed estimates both of what was needed and of what could have been done with available resources.

The pervasive shortcomings in production results noted above would have been of little immediate moment if the potentials against which they were measured had been derived merely as part of an abstract, idealized plan for agricultural reform. As a matter of fact, however, these potentials grew out of a carefully formulated program for utilizing available factors of production so as to maximize our contribution toward meeting the essential food needs of this country as well as the most urgent food needs of our allies and of liberated areas. Shortcomings relative to such strategic standards represented a serious burden to the United Nations war effort as well as a direct threat to the rapid and secure consolidation of the peace.

Why, then, did agricultural production fall so seriously short even of feasible potentials? Was its limited expansion enforced by crippling shortages in the available supply of land or labor or machinery or in other production necessities? Were the basic requirements of thorough agricultural mobilization clearly explained by leading government officials and then resolutely implemented with appropriate price and other incentives as well as supporting controls? Was the failure to achieve further progress traceable to the resistance of farmers or of the general public to additional adjustments?

It is to questions such as these that the following chapters will be addressed. In general, the analysis is divided into the two periods whose differing characteristics have already been noted repeatedly: 1940-43, the period of general expansion; and 1944-45, the period of comparative stabilization. The first of these is given somewhat the more intensive consideration because it witnessed the initial exciting upsurge in production as well as the curbing of that upsurge; because the patterns of under-utilizing available resources which emerged and began to harden during that period persisted during the remaining years of the war; and, above all, because the fundamental national policies which were crystallized during these early years of the world emergency effectively resisted later modification and hence determined the future course of agricultural mobilization.

## CHAPTER IV

### UTILIZATION OF LAND RESOURCES

THE volume and composition of agricultural production are determined primarily by the use made of land and livestock resources. The output of needed crops is dependent on the amount of acreage brought into production, on the level of productivity per acre, and on the extent to which land use patterns are shifted in favor of the relatively more essential crops. The output of meat and other animal products is a resultant of the adequacy of available feed supplies and of the allocation of such supplies among the various classes of livestock. But the ways of agriculture are deeply rutted by tradition. A major emergency like war provides a test of whether a people can shake off old patterns of production and turn the full force of their energies to shouldering the pressing new burdens thrust upon them. In order to understand why the total production of needed nutrients in the recent war fell materially short of practicable potentials as well as of urgent requirements, it is necessary to examine in turn each aspect of this combination of old habit and new opportunity. Where potentials remained unrealized, explanations for such shortcomings must be sought.

#### I. CROPLAND ACREAGE

Several indices reflect unfavorably on the extent to which the acreage in crops was expanded during the war. First, as shown in Table 7, the

TABLE 7  
TOTAL ACREAGE OF PRINCIPAL CROPS, 1929-45 <sup>1</sup>  
Millions of Acres

1929 .....	363.0	1935 .....	361.9	1941 .....	346.2
1930 .....	369.6	1936 .....	360.3	1942 .....	349.7
1931 .....	370.6	1937 .....	363.0	1943 .....	360.0
1932 .....	375.5	1938 .....	354.3	1944 .....	363.2
1933 .....	373.1	1939 .....	342.5	1945 .....	357.0
1934 .....	339.0	1940 .....	346.6		

<sup>1</sup> Total acreage of the commonly cited 52 principal crops planted or grown. Alfalfa seed, red clover seed, alsike clover seed and lespedeza seed are included in the count of crops but not in total acreage because their acreage would be mostly duplicated in the tame hay acreage. The acreage of peanut hay is excluded because it would largely duplicate the acreage of peanuts picked and threshed. Other crops not included are sweet corn for markets, some of the less important commercial vegetables (63,600 acres in 1945), farm gardens, most market gardens, hops, spelt, hemp, velvet-beans, various legumes and other crops harvested by livestock, minor crops and fruits and nuts. The acreages shown include some crops harvested in succession from the same land.

*Source: Crop Production—Annual Summary 1945, p. 32.*

acreage planted to crops increased by less than 4 percent between 1940 and 1943. Thus, even in a national crisis calling for all-out production, the farmer and his government tutors were still following the lessons of acreage restriction learned since 1933. Second, even the so-called "bumper" acreage finally attained in 1943 was so modest that it had been exceeded by 10 million acres or more during 1930, 1931, 1932 and 1933, and it had even been exceeded by 3 million acres as recently as 1937. Third, the increases achieved were far overshadowed by the large amount of land still being under-utilized in terms of intensity of production. In 1939, 530 million acres were classified by the Bureau of the Census as available for crops, of which about 342 million were planted, 57 million were in the category of "idle or fallow cropland," and the remaining 131 million were in "plowable pasture," defined as "land used only for pasture... which could have been used for crops without additional clearing, draining or irrigating."<sup>1</sup> Inasmuch as the clearing and breaking of new lands for cultivation tends to be a slow process, and one which makes heavy demands on labor, it was apparent that most of the potential increase in acreage devoted to crops would have to come not from net additions to the total land available for crops but from the release of idle and fallow cropland and plowable pasture. But even these latter accounted for about 170 million acres as late as 1943, or almost half as much as was actually employed in crop production.<sup>2</sup>

Of course, some of the land not being used for crops had to be kept fallow in accordance with rotation cycles, some of it was not fertile enough to warrant more intensive production efforts, and some of it was too susceptible to erosion to warrant risking permanent damage by plowing it. On the other hand, it was estimated, after full consideration of soil conservation desiderata, that between 35 million and 60 million acres could have been shifted into crop production from the 1939 level of idle and fallow cropland and plowable pasture, in contrast with the actual

<sup>1</sup> U. S. Bureau of the Census, *1940 Census of U. S., Agriculture*, U. S. Summary, First Series, U. S. Government Printing Office, 1941, p. 7.

<sup>2</sup> In computations involving the utilization of land in farms, the Bureau of Agricultural Economics assumed that there had been no significant changes during the war either in the total land available for crops or in the acreage accounted for by woodland, house yards, feed lots, barnyards, roads and wasteland. (*Maximum Wartime Production Capacity of American Agriculture*, March 31, 1943, p. 3.) Accordingly, with 530 million acres available for crops and only 300 million planted in 1943, about 170 million remained in the two categories encompassing land available for crops but not so used.



transfer of only about 18 million acres which had materialized by 1943.<sup>3</sup> Further evidence of the inadequacy of efforts to utilize land available for more intensive production is provided by the finding of a Bureau of Agricultural Economics report that, "In humid areas where more land classed as plowable permanent pasture could be brought into crop use, there was, instead, a slight wartime increase in [plowable pasture] acreage."<sup>4</sup>

The shortcomings in the development of this major source of additional production during the first two years of active American participation in the war were finally called to public attention by War Food Administrator Marvin Jones in July 1943. In announcing a new drive to expand to 380 million acres in 1944 the acreage devoted to crops, he compared the 377 million acres planted in 1932 with the 364 million acres planted in 1943 and then emphasized that, "Our planted acreage of food crops can be expanded without plowing up land which should be kept in grass if we use the cropland which has been idle during recent years and if we speed up the cycle of crop rotation on some farms."<sup>5</sup> The acreage in crops actually did increase in 1944, although by less than one-fifth as much as had been requested; but even this increment was eliminated in 1945 when such acreage dropped to below the 1943 level.

The response to appeals for expanding the acreage of crops varied markedly among the major agricultural regions. In the course of preparing their report on maximum production capacity, the Bureau of Agricultural Economics and the Agricultural Research Administration had estimated, as a "first approximation", that such acreage could be expanded above 1942 levels by 11—12 percent in the Northeast, the Southeast, and the Pacific-Northwest; by 8—9 percent in the Appalachian,

<sup>3</sup> In the report cited in the preceding footnote, it was estimated that the maximum wartime production program would require the planting of 398 million acres to crops, to be obtained by reducing idle and fallow cropland from the 1939 level of 57 million acres to 25 million, and by reducing plowable pasture from 131 million acres, the 1939 level, to 107 million. (*Ibid.*, p. 7.) In a later draft of that report, with the same title but issued in collaboration with the Agricultural Research Administration and dated June 1, 1943, the maximum acreage recommended for the production of crops was reduced to 376.5 million acres. Still later estimates of production capacity, prepared in collaboration between the Department of Agriculture and the Land Grant Colleges, set the crop acreage potential at 401.9 million acres, including some minor crops not covered by the earlier totals. (*Agriculture's Maximum Wartime Production Capacity, Statistical Summary*, August 1943, p. 52.)

<sup>4</sup> Donald B. Ibach, *Cropland Use and Soil Fertility Practice in War and Peace*, Bureau of Agricultural Economics, mimeographed, January 1946, pp. 6, 54.

<sup>5</sup> Department of Agriculture news release, July 13, 1943.

South Central, and Great Plains areas; and by 3—4 percent in the Lake States, the Corn Belt, and the Pacific-Southwest.<sup>6</sup> A review of the acreage of principal crops harvested during 1944 and 1945<sup>7</sup> reveals that four of the nine regions, the Lake States, Corn Belt, Great Plains and Pacific-Northwest, attained these estimated potentials. The Northeast and Pacific-Southwest barely exceeded their 1942 levels by about one percent. In the remaining three, the acreages in 1945 were less than they had been in 1942—by 2 percent in the Appalachian and South Central states and by about 9 percent in the Southeast. This meant that acreage gains had actually been least in the areas where the labor to handle larger tracts was relatively most plentiful.

In probing for an explanation of the laggard and inadequate expansion of crop acreage, one is led by the very absence of causations unique to this particular shortcoming to recognize it as merely part of the pervasive pattern of shortcomings in agricultural production relative to the requirements and potentials of war mobilization. The fundamental problem of converting agriculture to a war footing was rooted in a conflict between the momentum of past habits of production, reinforced by acquired experience and available equipment, and the necessity for major adjustments in agricultural output if the supply of needed commodities was to be maximized. Despite the not inconsiderable force of inertia, agricultural resources could have been readily harnessed to new tasks, especially in the environment of emergency adjustments created by war, but only under the spur of an effective program of incentives, aids, controls and even coercions geared to the effectuation of clearly defined goals.<sup>8</sup> The targets did emerge in due course, although in the form of production goals which will be seen later to have been of a rather uncompelling sort. Exhortations, too, were broadcast in abundance. But these were never integrated with production controls, price policies, the allocation of farm machinery and fertilizer, the redistribution of farm labor, the extension

6 *Maximum Wartime Production Capacity of American Agriculture*, June 1, 1943, pp. 14-23.

7 *Crop Production—Annual Summary 1945*, p. 30d.

8 Great Britain initiated a plow-up campaign in 1939, prior to the outbreak of the war, which actually exceeded the goals set for it. The success of this undertaking was due not only to its clear definition of objectives and its appeal to patriotism, but also to the payment of a direct subsidy for every acre of seven-year grassland brought into cultivation and to the fact that the County War Agricultural Executive Committees were given the right to enter each farm, and, through a Cultivation Order, to compel any farmer to plow up a certain quota of land. As might be expected, such unmistakable coercive powers rarely had to be invoked. (*Farming in Wartime Britain*, p. 4.)

of distribution and rationing controls, and the provision of credit—the individual production guides which, taken together, constitute the effective determinant of the scale and composition of output within the limits set by weather. As might have been anticipated, slack reins and competitive attractions and distractions proved to be a guarantee neither of correctness of direction nor of speed or economy.

## 2. OUTPUT PER ACRE

Increasing the agricultural output per acre offered still richer production potentials than the expansion of acreage. The United States had less than three acres per capita in cultivation. To that small plot each of us had to look for food enough to last through the entire year and for much of our textiles; from that same plot had to come a variety of industrial raw materials, food for our allies and the means of subsistence for the people in liberated areas. Nevertheless, this sector of mobilization, too, was characterized by the familiar pattern, with achievements overshadowed by practicable potentials, and with the upsurge of wartime progress curbed almost at the outset.

In view of the comparatively small adjustments effected in the acreage devoted to crops, it is apparent that the bulk of the wartime changes in the volume of crop production was traceable to variations in productivity per acre. Measured in terms of yields per harvested acre of 18 major field crops and 10 fruit crops, the index commonly used by agricultural officials, such productivity rose to a peak 13% above 1940 in 1942, dropped back to only 3% above 1940 in 1943, and then rose to between 8 and 10% above 1940 during the last two years of the war. Approximately the same fluctuations are revealed in Table 8 by another measure of productivity—total crop production per acre of crop land—despite the latter's broader coverage of crops, and despite its consideration of crop failure and summer fallow acreage as well as of harvested acreage.

Variations in crop yields are the resultant both of weather fortuities and of changes in the extent to which proven techniques for raising productivity are applied, including soil improvement practices, higher-yielding seed varieties and heavier fertilization. In view of the dominant role of productivity advances in accounting for wartime gains in crop production, it is a matter of some moment, from the standpoint of assessing mobilization achievements, to seek some index of the extent to which the increment in yields was the product of mobilization policies or even of the continuation of long-term trends toward improved production methods, as contrasted with such factors as the accident of favorable weather. Such a determination cannot be made with accuracy because no

TABLE 8  
CROP OUTPUT PER ACRE, 1940-45  
Index Numbers (1940 = 100)

Year	Crop yields per harvested acre 28 crops <sup>1</sup>	Total crop pro- duction per acre of cropland <sup>2</sup>
1940 .....	100	100
1941 .....	101	103
1942 .....	113	115
1943 .....	103	104
1944 .....	110	112 (prelim.)
1945 .....	108	...

<sup>1</sup> As computed from yields of field crops per harvested acre and yields of fruit per acre of bearing age, combined in proportion to their relative values during the 1923-32 (pre-drought) period. Includes corn, oats, barley, sorghums for grain, wheat, rye, flaxseed, rice, cotton, tobacco, tame hay, wild hay, dry edible beans, peanuts picked and threshed, potatoes, sweet potatoes, soybeans, sugar beets, oranges, grapefruits, lemons, apples, peaches, pears, grapes, plums, prunes and apricots. (*Crop Production-Annual Summary 1945*, p. 34.)

<sup>2</sup> Computed on a total cropland basis (harvested acreage, plus failure and summer fallow acreage), with a variable weight given to individual crops in each year according to the relative production importance (as measured in average 1935-39 prices) of the crops in the particular year. (Barton and Cooper, *op. cit.*, pp. 72, 84.)

precise measure has yet been devised to evaluate the distinctive influence of weather conditions on productivity.<sup>9</sup> It involves not only average temperature and precipitation during the growing season, but also the timing, amount and geographic coverage of fluctuations in rainfall and temperature, as well as their differential effects on various crops. Indeed, it has become common practice to grade the relative favorableness of weather conditions by the level of resultant crop yields. Nevertheless, some reasonable approximations can be developed.

A report by the Bureau of Agricultural Economics bearing on this problem concludes that more favorable weather was responsible for about 38% of the increase in crop production per acre between the 1935-39 average and 1944, with credit for the remainder divided equally between the greater consumption of fertilizers and a residual category of factors including soil improvement practices and the wider use of hybrid seed corn.<sup>10</sup> Analysis of the period 1940-43, however, and especially of the sharp decline in productivity between 1942 and 1943, suggests the alternative conclusion that weather may have accounted for between one-half and two-thirds of the increase in yields during these three years.

<sup>9</sup> For some indication of the complexity even of attempting to determine weather patterns, see Louis H. Bean, *Crop Yields and Weather*, U. S. Government Printing Office, February 1942.

<sup>10</sup> Barton and Cooper, *op. cit.*, p. 37.

Approximately 85 per cent of the sudden increase in productivity recorded in 1942 was lost again in 1943. In searching for the cause of this reduction, it would seem that if the gain in 1942 had been due primarily to effective mobilization measures respecting productivity, so heavy a loss the very next year could only have resulted either from a reversal of such measures or from exceptionally unfavorable weather. But neither of these developments materialized. The soil-building practices part of the agricultural conservation program continued to expand in 1943,<sup>11</sup> fertilizer consumption grew larger in each major plant food category,<sup>12</sup> and a greater proportion of corn acreage was sown with hybrid seed than ever before.<sup>13</sup> Moreover, although weather conditions were quite substantially more favorable in 1942 than in 1943, the latter, far from being unusually poor, was itself rated as slightly better than normal.<sup>14</sup> In combination, these facts tend to support the view that the 1943 level of productivity—only 3 or 4 percent above that of 1940—provided a not unduly conservative measure of the contribution to higher output per acre made by non-weather factors, including mobilization measures, during 1940-43.

Earlier discussion has already brought out that the Bureau of Agricultural Economics and the Agricultural Research Administration esti-

11 Mr. N. E. Dodd, Chief of the Agricultural Adjustment Agency, in testimony before a Congressional Committee, not only stated that farmer interest in soil conservation practices had continued to increase greatly, but cited data to show that farmers had earned in excess of one-sixth more in government payments for soil-building practices in 1943 than in 1942. (*House Hearings on Agriculture Department Appropriation Bill, 1945*, pp. 923-4.)

Steady progress in soil conservation was also reported by the Chief of the Soil Conservation Service, Dr. H. H. Bennet, who pointed out that by June 30, 1944 more than 65,000,000 acres were producing under farm-wide soil conservation programs as compared with only approximately 35,700,000 acres at the end of 1941. (Department of Agriculture news release, February 12, 1945.)

12 See Chapter VIII, Table 30.

13 *Agricultural Statistics—1946*, p. 41.

14 "... conditions in 1942 were favorable for nearly all crops and in nearly all states." (*Crop Production—Annual Summary 1942*, December 1942, p. 4.) "... 1942 was one of the best crop years this country has ever had, in part because it was the second season in succession with much above-normal rainfall in practically all of the low-rainfall states." (*Crop Production—Annual Summary 1943*, December 1943, p. 4.)

"Growing conditions in 1942 were more favorable than for any recent year. They were less favorable in 1943 but still slightly above average. In 1944, despite the unsatisfactory beginning, they averaged about mid-way between the two previous years." (From an address by J. B. Hutson, President of the Commodity Credit Corporation and Director of Production, War Food Administration, October 24, 1944.) This same appraisal of 1943 weather conditions was made by War Food Administrator Marvin Jones in *House Hearings in Agriculture Department Appropriation Bill, 1945*, p. 752.

mated in 1943 that crop yields could have been increased under normal weather conditions by 5 - 10 percent above "normal yields" <sup>15</sup> by 1945, and also that actual gains in this area may have approximated one-half to two-thirds of such potentials.<sup>16</sup> Lest the progress represented by such results be overrated, however, it should be noted that in this instance potentials were set at levels so low as hardly to justify their designation as such. The original objective, appropriately enough, had been to estimate possible increases in crop yields on the assumption that, "a strong war-time practice improvement program [would be] undertaken by departmental and State agencies and backed up with adequate financial support and education."<sup>17</sup> But the estimates which emerged had not only been revised downward to accord with "the physical limitations of available materials"—thus not taking full account of the possibilities of substantially altering established patterns of fertilizer and machinery distribution<sup>18</sup>—but had also been "adjusted to a 'realistic' basis of what could be achieved in view of farmer psychology and resistance to change in short periods of time."<sup>19</sup> Adjustments of this latter order not only ignored the possibilities and justification for speeding up needed changes during the war but came perilously close to converting estimates of potentials into mere estimates of probable results. Indeed, of the twelve crops for which potentials were estimated in the report, assuming concentrated efforts to raise the productivity of each, the estimated maxima had already been exceeded by the actual yields of six of these crops not only in 1943 but even in 1940.<sup>20</sup> Nevertheless, the foregoing potentials were again reduced by one-third to one-half on the grounds that a concurrent program on several crops would reduce the potentials attainable with re-

15 "In general, 1937-41 average yields, adjusted for changes in the regional distribution of crop acreage and in some cases for known upward trends in yield, have been used [as estimated normal crop yields]." (*Maximum Wartime Production Capacity of American Agriculture*, June 1, 1943, p. 47.)

16 Chapter IV, section 4.

17 *Maximum Wartime Production Capacity of American Agriculture*, June 1, 1943, p. 47.

18 See Chapters VII and VIII.

19 *Maximum Wartime Production Capacity of American Agriculture*, June 1, 1943, p. 47.

20 It was estimated that yields per acre could be raised to the following levels if special efforts were concentrated on each of these crops: wheat—13.0 bushels; corn—31.8 bushels; oats—32.2 bushels; barley—20.6 bushels; grain sorghums—11.3 bushels; all tame hay—1.6 tons; alfalfa—2.6 tons; soybeans—25.5 bushels; peanuts—826 pounds; flaxseed—8.6 bushels; potatoes—128.3 bushels; and sweet potatoes—137.3 bushels. (*Ibid.*) For actual yields, see *Crop Production—Annual Summary 1945*, pp. 33-34.

spect to each.<sup>21</sup> And it was this latter series of potential increases above "normal yields," actually ranging from 5 percent to 25 percent for the crops listed, which was rounded off into the concluding estimate of over-all potential gains of 5-10 percent.<sup>22</sup>

Many of the shortcomings in raising productivity levels during the war seem to have been attributable to its comparative neglect within the agricultural mobilization program; and most of the credit for such gains as were achieved seems to have been traceable to the continuation of certain programs and trends which had been established prior to the war. It was apparent from the relatively modest contributions envisioned as attainable through acreage expansion that the dominant source of potential increases in the volume of crop and pasture production had necessarily to be greater output per acre. Oddly enough, however, the farm mobilization program devoted even less direct effort to ensuring the maximum realization of productivity potentials than to the expansion of crop acreage. And neither of these ever received the extraordinary attention given to increasing the supply of farm machinery or farm labor. Nor were either acreage increases or productivity gains energetically promoted by means of special payments or special controls or special coercions or even by the proffer of special forms of social recognition to cooperating farmers. At least, annual production goals proposed specific acreage levels for each growing season, crop-by-crop as well as state-by-state. But even these production guides made no mention of potential increases in crop yields, not even on an over-all basis. Similarly, although the practices considered most promising from the standpoint of raising crop yields were clearly outlined by the Bureau of Agricultural Economics and the Agricultural Research Administration, no specialized programs were established to call these potentials to the attention of farmers periodically, to set annual quotas for their progressive attainment, to provide whatever motivations were found necessary, and to supply effective organizational machinery in support of these undertakings.

The record of inadequacy is augmented by the fact that the gains achieved in productivity seem to have come about in large part independently of mobilization measures. It has already been noted that the largest contributor to heavier yields, favorable weather, could hardly be considered the product of mobilization efforts. Increased consumption of fertilizers, probably the next most important source of productivity

<sup>21</sup> *Maximum Wartime Production Capacity of American Agriculture*, June 1, 1943, p. 47.

<sup>22</sup> *Ibid.*, p. 49.

gains, was primarily the result not of farm practice adjustments induced by mobilization authorities but rather of the expanded demand for fertilizers which has generally been associated with rising farm incomes. Hybrid seed corn, rated by the Bureau of Agricultural Economics as the third most important cause of total productivity gains, continued to increase its coverage of total corn acreage during the war, but at a rate showing no evidence of wartime acceleration.<sup>23</sup>

Such comparative indifference by mobilization authorities suggests either that they did not consider significant advances in this area to be practicable, in contrast to the competent judgment cited above, or that they considered the indirect incentive of higher crop prices all the inducement that was necessary to ensure maximum progress. Among the factors casting doubt on the latter assumption might be noted: first, that specialized information was necessary to determine which practices were likely to prove most rewarding for different crops and in particular areas, to gauge how much effort should be devoted to such practices, and to actually carry out such practices successfully; and, second, that particularly important needs had to be kept in the spotlight lest they be neglected in the welter of competing claims for the farmer's limited energy and facilities.

In reviewing the foregoing, it is difficult to avoid the inference that the enormous benefits provided by the extraordinarily favorable weather during the early years of the war also had the less salutary effect of easing the pressure for more effective mobilization by disguising its inadequacies.

### 3. SHIFTS IN LAND USE AND THE RELATIVE EFFICIENCY OF CROPS

In view of the enormous scale of immediate and prospective requirements at home and especially abroad relative to the limited resources of the domestic farm plant, it was apparent from the outset that agricultural mobilization would require not only increases in the total cultivated acreage and in the average levels of productivity, but also the readjustment of the peacetime pattern of allocating available cropland and pastures among alternative farm products.

While the fundamental purpose of this process of conversion was roughly similar to that undertaken by industry, loose comparisons of the two have all too frequently led to misconceptions about the character

<sup>23</sup> Percentage of total corn acreage planted with hybrid seed: 1939—22.5; 1940—30.4; 1941—39.0; 1942—45.7; 1943—51.4; 1944—58.9; 1945—63.5. (*Agricultural Statistics—1946*, p. 41.)



of the shifts involved for agriculture. In the conversion of the manufacturing plants whose achievements dominated public attention, the primary emphasis was on redirecting production from goods patently limited to civilian uses to the quite different weapons and supplies necessary to the furtherance of military and naval strength. But there were very few farm products whose usefulness to the economy was so seriously diminished by the onset of war as to win public recognition of the desirability of eliminating their further production. Indeed, almost all farm products actually added to the output of needed food values and fiber supplies, although in widely varying degrees. Consequently, the only practical basis for further expanding the contribution of American agriculture was to concentrate production increasingly on those commodities which were relatively the most efficient in converting farm resources into needed end-products.

Although food requirements are ordinarily expressed in terms of meats and fish, dairy products, eggs, fats and oils, grains, vegetables, fruits, sugar products and beverage crops, these are but the vehicles for supplying the nutrients on which bodily nourishment depends: carbohydrates, proteins, fats, minerals and vitamins. The significance of dealing with these nutrients directly in assessing consumption needs lies in the fact that the very same nutrients can be obtained from a variety of foods which differ markedly in physical appearance, taste, and, of particular importance for the mobilization of agriculture, in their requirements of production resources. Thus, analysis of the nutritional content of various crops and livestock products, together with an analysis of their relative demands on land, labor and other farm resources during the production cycle, offered a useful guide to the planning of mobilization objectives by permitting the comparison of alternative farm products in respect to their yield of various nutrients per acre, per man-hour of farm labor and per unit of other factors of production.

Research has revealed an extraordinary range in the nutritional efficiency of common foods. Whole wheat, for example, yields 8 times as much food energy per 100 man-hours of farm labor as hogs and 40 times as much as beef cattle. Dry peas yield 7 times as much protein per acre as the feeds used to produce dairy products, 10 times as much as the feeds going to hogs, and 27 times as much as the feeds consumed by beef cattle. Soybeans provide 4 times as much fat per acre as the feed used to produce butter, and 14 times as much fat per unit of farm labor as butter. Carrots produce many times the essential food minerals per acre that can be secured from animal products: 6-75 times as much as dairy products,

TABLE 9  
NUTRITIONAL OUTPUT PER UNIT OF ALL FARM RESOURCES<sup>1</sup> USED TO PRODUCE SELECTED FOODSTUFFS

Farm products	Energy value (1,000 calories)	Protein (lbs.)	Fat (lbs.)	Carbo-hydrates (lbs.)	Minerals			Vitamins				
					Cal-cium (gms.)	Phos-phorus (gms.)	Iron (mgs.)	Vitamin A (1,000 int'l. units)	Thiamine (mgs.)	Ascorbic acid (gms.)	Ribo-flavin (mgs.)	Niacin (mgs.)
Whole wheat .....	1,120	98	14	497	165	1,164	15,574	0	1,565	0	481	15,110
Soybeans, whole .....	987	217	113	74	641	1,654	23,694	367	3,296	0	846	6,841
Dry, edible peas .....	651	99	4	250	134	730	11,038	487	2,317	0	645	3,310
Sweet potatoes .....	273	8	3	134	76	98	1,670	8,398	213	54	147	2,506
Dairy products <sup>2</sup> .....	140	12	22	15	186	141	318	451	42	2	255	140
Hogs .....	196	7	45	0	2	39	554	0	376	0	51	1,953
Chickens and eggs ..	39	8	6	1	10	50	588	177	42	1	91	398
Beef cattle .....	77	11	13	0	3	54	750	0	45	0	63	2,382
Carrots .....	132	8	2	61	117	112	2,368	21,134	179	21	210	4,359
Lettuce .....	18	3	1	7	23	26	514	219	83	16	51	514
Grapefruit .....	164	4	1	83	63	67	1,129	0	272	129	73	1,858
Apples .....	127	1	2	64	12	20	603	156	49	8	138	984

<sup>1</sup> A unit represents the land, labor and other farm resources required to produce \$10 worth of each product or combination of products in the 1935-39 period.

<sup>2</sup> Milk used in the way all milk was used in 1942.

Source: R. P. Christensen, *Using Resources to Meet Food Needs*, Bureau of Agricultural Economics, mimeographed, May 1943, pp. 34, 45, 57, 58.

13-60 times as much as chickens and eggs, 66-100 times as much as cattle and 25-200 times as much as hogs. Even greater extremes are to be noted in the efficiency with which alternative foodstuffs produce essential vitamins, with some commodities yielding hundreds of times as much as others per unit of various resources.<sup>24</sup>

Because agricultural planning had to be predicated on a summary consideration of the use made of numerous resources, Table 9 is provided to illustrate the differences in the nutritional efficiency of a few common foods per unit of all farm resources, including land, labor, fertilizers and others as well. It will be seen that the vast range of the differentials cited above is not significantly narrowed by this more comprehensive measure.

The foregoing type of analysis offered several important suggestions for the planning of land use adjustments during the war, although these had, of course, to be tempered by other considerations in the development of a practicable program for mobilization. Perhaps the major conclusion to be drawn from a review of the economy of alternate means of producing needed nutrients was that the two-step cycle of growing feed and then having it consumed by livestock in order to supply meat is far inferior to the production of food crops directly available for human consumption. This would have counseled the progressive contraction of meat production up to the point where it was limited to the utilization of feedstuffs grown on land incapable of the production of more efficient food products, meanwhile diverting such released resources to the output of dry beans and peas, food grains and certain vegetables which, together, would have yielded a greater output of the proteins and other nutrients previously obtained from meat. A second general conclusion dictated by nutritional requirements was the need for an increase in the production of the vegetables and fruits which supply Vitamin A and ascorbic acid most efficiently, such as carrots, cabbage, potatoes, tomatoes and citrus fruits. One further conclusion to be drawn from these data was that the production of dairy products, and especially of whole milk, needed to be increased substantially relative to other livestock enterprises both because of its favorable yield of calcium and riboflavin—respectively the mineral

<sup>24</sup>The foregoing computations are based on the detailed analysis of the nutritional yield of 76 categories of food per unit of various agricultural resources expended in their production presented in R. P. Christensen's *Using Resources to Meet Food Needs*, Bureau of Agricultural Economics, mimeographed, May 1943, pp. 21-56.

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and the vitamin most likely to be deficient in wartime diets<sup>25</sup>—and also because of its markedly greater yield of most basic nutrients than other animal products.

In addition to the above broad recommendations, the analysis of comparative efficiency in the production of nutrients lent itself to the development of increasingly detailed recommendations not only in regard to reapportionment of the total national acreage allotted to each crop but also in regard to the geographical redistribution of each such total allocation. Thus might have been derived specific suggestions for altering the ratio of pasture to cropland acreage, for modifying the relative contributions of cattle and calves, hogs, and sheep and lambs, to total meat production; and guides might also have been provided for determining how a proposed change in the acreage allotted to food grains, vegetable oils, or some other major food product category should be divided among the various crops included within that category. Although the inter-crop comparisons which have been cited in this section were based on the average efficiency of the total domestic production of each commodity, a refinement of the same analytical procedures would readily have indicated differentials in the relative efficiency of production of each crop in the various regions and subregions where it is grown, thus suggesting the directions in which available acreage might have been shifted in order to heighten the average efficiency of production.

It is obvious that thoughtlessly intensive cultivation of this approach could have resulted in an infinitely complex array of recommendations, many of them involving adjustments for the sake of theoretical perfection whose putative benefits might well have been overshadowed by the delays, hardships and costs involved in seeking to bring them to fruition. But the possibilities of abuse, whether through over-elaboration or through under-estimation of other relevant factors in establishing mobilization objectives, must not be permitted to obscure the sound and major contributions offered by the analysis of productive efficiency in terms of nutrient output. In the first place, there was no sound alternative basis for re-directing the agricultural production effort; the only other available courses being either the preservation of peacetime patterns or the adoption of criteria incapable of justification on any scientific grounds. Other countries faced with the necessity of making the most effective use of their food pro-

<sup>25</sup> Dr. Russell M. Wilder, Chief of the Civilian Food Requirements Branch, Food Distribution Administration, in a statement to the Senate Sub-Committee on War Mobilization, presented in *Senate Hearings on War Mobilization*, Part 2, galley, p. SO22. Also see Table 40 in Chapter XI.

duction resources, including Great Britain, the Soviet Union and Germany, were forced to act in accordance with these same principles, although allowing for some modification dictated by particular domestic urgencies.<sup>26</sup> Second, the gains promised by the proposed adjustments, even after allowances for practical difficulties, were of staggering proportions—having been estimated by the Bureau of Agricultural Economics at a 40 percent increase in the nutritional content of our food supply within two years.<sup>27</sup> Finally, the actual proposals which resulted from appraisals of the economy of nutrient production will be seen to have been relatively so cautious and moderate as to dispel any residual justification for the ridicule sometimes aimed at them.

Distribution factors, too, had to be considered in determining how to repattern the allocation of agricultural facilities, inasmuch as the objective was not only to maximize productive efficiency but also to yield the most generous possible supply of needed nutrients at the point of consumption with the least burdening of straitened resources used jointly by agriculture and other sectors of the war economy. Shortages in container materials, in transportation and storage facilities (especially in the case of refrigerated space), and in certain types of processing capacity, suggested restricting the output of crops which made excessive demands on such resources relative to their contribution of needed food values. In the case of unduly bulky products, for example, it was necessary to consider either restricting output to the level of demand in areas adjacent to the sources of supply or proposing the construction of dehydration

26 "Most nations which have meagre resources have made 'ends meet' by producing cereals and similar foods that yield large amounts of nutrients relative to input factors. Russia and Germany have been able to alleviate their food supply problem largely by officially encouraging the greater production of vegetable proteins and oils and by continued high production of such foods as Irish potatoes." (William Kling, "A Nutritional Guide to Wartime Use of Agricultural Resources", *Journal of Farm Economics*, August 1943, p. 683.) Great Britain's Minister of Agriculture, on December 16, 1942, described the chief objective of his government's "master plan" for agriculture as being "to change this island from a mainly grazing to a mainly arable country." First priorities in arable production were given to wheat, oats, potatoes, barley and sugar beets. Among animal products, milk was given first place. (*Farming in Wartime Britain*, p. 2.) This same report mentions in discussing the reduction of animal product enterprises that, "it takes anything from five to fifteen acres under animal feeding stuffs to save as much shipping space as one acre under crops for human consumption." (*Ibid.*, p. 24.)

27 Estimate cited by Dr. R. M. Wilder in *Senate Hearings on War Mobilization*, Part 2, galley, p. SO30.

facilities in order to economize on freight-carrying facilities.<sup>28</sup> Restrictions on output also had to be considered in regard to the fruits and vegetables which were still subject to heavy waste and spoilage in the course of distribution.<sup>29</sup>

Few of the changes in the composition of agricultural production which would have been necessary to ensure a heavily expanded output of needed nutrients were capable of prompt execution. Considerable time is required to modify established farming systems. Production equipment and processing facilities cannot be changed overnight. Changes in farming techniques may have to be learned; marketing facilities have to be converted to support the contemplated adjustments in production; and new balances have to be worked out in individual farm plans. Nevertheless, while factors such as these might have limited the theoretical speed with which adjustments of the kind now under discussion could have been accomplished, inertia, uncertainty about the new as compared to the old, and personal self-interest constituted even more serious obstacles to the effectuation of a sweeping program of crop and livestock shifts. In view of the urgent need for every possible increment in nutrient output, therefore, one of the basic tests of the effectiveness of our food management effort was its success in overcoming these difficulties through a well-organized and hard-hitting program of appropriate explanations, aids, rewards, safeguards against undue risks, and even coercions.

#### 4. ACREAGE ADJUSTMENT POTENTIALS

The procedures, findings and considerations which have just been reviewed provide the general framework within which a variety of specific programs of acreage adjustments may be developed depending on how much of an increase in nutrient output per unit of scarce resources is deemed necessary, on how much time is considered to be available for effectuating proposed shifts, and on how much resistance to the adjustments is anticipated from farmers, distribution interests and consumers.

Production planning on a national basis had been under way in respect to large segments of agriculture since 1933. During the latter part of 1941, as the war drew closer, the scope of these planning activities was widened to include preparation for 1942 of the first comprehensive set

<sup>28</sup> The practical significance of such considerations is illustrated by a tabular comparison of the vitamin content of a wide variety of vegetables per 100 grams of shipping weight in William Kling's "A Nutritional Guide to Wartime Use of Agricultural Resources," *Journal of Farm Economics*, August 1943, p. 689.

<sup>29</sup> These problems are discussed further in Chapter XII.



of crop and livestock production goals designed to encompass virtually the entire farm plant. As has been seen in the preceding chapters, however, it was not until 1943 that a series of attempts were made to estimate agriculture's maximum wartime production capacity and to outline the specific adjustments whereby such a peak might be approached.<sup>30</sup>

Crop by crop, a comparison of the acreage adjustments suggested in these several reports reveals substantial areas of agreement as well as important differences. On the relative scale of increases proposed for wheat, corn, tame hay, Irish potatoes, soybeans and sugar cane, there is very close agreement. Moderate differences appear in the suggestions relating to oats, sweet potatoes, dry peas, peanuts and flaxseed. With respect to the remainder, including cotton, tobacco, vegetables for fresh markets and for processing, sugar beets, grain sorghums, and dry beans, these recommendations vary quite significantly. While some of these differences are to be noted between the proposals labelled A and B in Table 10, the major gap in the case of most crops is between A and B on the one hand and C and D on the other.

Comparing the several proposals in Table 10 as entities, it is apparent that the adjustments suggested in A were the most far-reaching, that those in B followed closely behind, and that those in C and D, so nearly identical as to warrant their treatment as essentially one, were distinctly the most conservative. These differences were not attributable to varying conceptions of the extent of need, for there was general acknowledgment that urgent requirements surpassed all realistic prospects of production. Nor were they traceable to unequal time allowances for the attainment of maximum output, inasmuch as each analysis was made in 1943 and was pointed toward 1945 as the year of peak effort. There were some differences in the assumptions about the availability of productive resources on which these proposals were premised, but the practical effect of these seems to have been limited.<sup>31</sup> Perhaps the best clue to the major source of these differences is that they were in almost every case a matter of the degree rather than the direction of proposed crop adjustments. Given the common recognition of overwhelming need, it seems fair to conclude that the primary root of these differences was disagreement about the extent of co-operation that could be gained from farmers, consumers and other interested groups in effectuating adjustments that were considered desirable in all proposals. Indeed, this deduction tends to be confirmed by the weight attached to this factor in each of the reports.

<sup>30</sup> See footnotes 11 and 12 in Chapter III.

<sup>31</sup> See footnote 20 in Chapter III and related textual discussion.

TABLE 10

COMPARISON OF ESTIMATES OF ACREAGE ADJUSTMENTS NECESSARY TO MAXIMIZE U.S.  
WARTIME CROP PRODUCTION CAPACITY

Crops	Actual Acreage 1942 <sup>1</sup>	Ratio of suggested acreage at peak capacity (1945) to actual acreage in 1942			
		Esti- mate A <sup>2</sup>	Esti- mate B <sup>3</sup>	Esti- mate C <sup>4</sup>	Esti- mate D <sup>5</sup>
	(1,000 acres)				
Wheat .....	52,227	121	125	127	123
Corn .....	90,552	113	108	108	108
Oats .....	42,595	83	89	91	91
Barley .....	19,536	109	97	94	94
Grain Sorghums .....	9,708	132	108	...	...
All sorghums, except for syrup	15,826	...	...	103	103
All tame hay .....	60,121	108	111	112	105 <sup>6</sup>
Vegetables for fresh market .	1,663	154	147	126	126
Vegetables for processing ....	2,100	105	136	118	118
Irish potatoes .....	2,789	160	167	168	168
Sweet potatoes .....	709	198	249	224	226
Dry edible beans .....	2,098	264	212	158	158
Dry peas .....	519	246	256	238	238
Soybeans, for beans .....	10,008	149	154	154	135 <sup>7</sup>
Peanuts, picked and threshed	3,439	247	265	224	202 <sup>8</sup>
Flaxseed .....	4,715	127	135	123	124
Sugar beets .....	1,048	46	44	84	84
Sugar cane .....	317	104	104	103	103
Cotton .....	23,302	80	84	96	96
Tobacco .....	1,377	83	83	105 <sup>9</sup>	105

<sup>1</sup> All planted acreage, except that harvested acreage is given for tame hay, vegetables for fresh market, sweet potatoes, soybeans for beans, peanuts picked and threshed, sugar cane and tobacco. (*Crop Production—Annual Summary for 1943*, pp. 1, 2, 17, 24, 26, 27.) Estimated acreage planted to vegetables for processing is from *Food Program for 1944*, p. 16.

<sup>2</sup> Estimate A was prepared by a committee of the Bureau of Agricultural Economics. (*Maximum Wartime Production Capacity of American Agriculture*, March 31, 1943, p. 12.)

<sup>3</sup> Estimate B represented a revision of preceding estimates by committees of the Bureau of Agricultural Economics and of the Agricultural Research Administration. (*Maximum Wartime Production Capacity of American Agriculture*, June 1, 1943, p. 11.)

<sup>4</sup> Estimate C is from the report prepared by the U.S. Department of Agriculture in co-operation with the Land Grant Colleges and issued in preliminary form in August 1943. (*Agriculture's Maximum Wartime Production Capacity*, Statistical Summary, p. 52.)

<sup>5</sup> Estimate D is from *Food Program for 1944*, pp. 16-17.

<sup>6</sup> All tame hay except soybean, cowpea, peanut and small grain.

<sup>7</sup> Planted acreage of soybeans grown alone.

<sup>8</sup> Planted acreage of peanuts grown alone.

<sup>9</sup> Data given only for all flue-cured tobacco.

Even more significant than the extent and causes of internal differences among these proposals was the comparative restraint which seemed to mark all of them. The potential contribution of a cropland adjustment program toward maximizing nutrient output is determined by the volume of acreage released from the production of one series of crops and hence made available for greater concentration on those which are deemed

more valuable. How much is actually gained depends on the relative use made of the three alternative types of inter-crop shifts which can be made: from non-foods to foods or feeds, the most rewarding nutrition-wise; from feedstuffs to crops for direct human consumption, usually the next most rewarding; and, finally, from the less efficient food crops to those which offer greater yields per unit of resources. In not one of these respects can the various proposals for attaining maximum production capacity be properly criticized as unduly extreme.

In considering the extent to which land would be freed for a change in crops, it is striking to find that all five proposals recommended increases in 14 of the 19 crop categories listed in Table 10 and decreases in just three, oats, cotton and sugar beets. Only barley and tobacco were subject to radically conflicting suggestions. Thus, the conversion programs proposed in the August 1943 and February 1944 reports suggested total reductions in customary crops of 6.1 million acres, or a mere 1.7 percent of the total acreage of principal crops in 1942; the June 1943 report suggested reductions of 9.7 million acres, or 2.8 percent of the 1942 total; and the March 1943 report, the most far-reaching, suggested reductions of 12.7 million acres, or still only 3.6 percent of the 1942 total. While even shifts of these seemingly minor proportions undoubtedly represented some challenge to the agricultural mobilization efforts, they could scarcely have been characterized as extravagant objectives in the perspective of war urgencies.

A similar regard for moderation is evident in the extent to which the various proposals sought to alter the basic composition of agricultural output. There were no suggestions for slashing cutbacks in the acreage devoted to non-foods such as cotton and tobacco, although huge stocks of the former were on hand, especially in the shorter staple lengths, and although tobacco catered to taste preferences which must be considered to have been sharply expendable during a war emergency.<sup>32</sup> On the contrary, two of the proposals suggested a reduction of but 4 percent in cotton acreage and an actual increase in the acreage of tobacco; and even the most extreme of the proposals limited its recommendations for reducing the acreage of these crops to a modest 20 percent in the case of cotton and 17 percent in the case of tobacco. This same disinclination for radical measures was reflected in the comparative adjustments recommended for feedstuffs as compared with those for food crops. It will be recalled that considerations of efficiency in the production of needed

<sup>32</sup> The conversion of cotton and tobacco acreage is discussed further in a later section of this chapter.

nutrients suggested a very substantial shift in acreage from feedstuffs used to produce meat in favor of more food crops. But instead of decreasing the acreage allotted to feedstuffs, each of the proposals under review recommended that it be increased. In fact, the average net increase in feedstuffs acreage suggested in Table 10 approximates the average net increase suggested for all of the food crops listed, with the single exception of soybeans. In the face of threats of unsurpassed food stringencies, shifts of such limited proportions were surely more vulnerable to criticisms of inadequacy than to complaints of extremism.

It seems clear, therefore, and it should be borne in mind later when estimated potentials are compared with official annual production goals and with actual results, that these various proposals for maximizing agriculture's production capacity did not contemplate any headlong conversion. Nevertheless, even the sober adjustments which they did envision promised extraordinary gains in the production of food values. For example, although the proposals contained in the February 1944 report were the most conservative of the several which have been discussed, these were estimated to provide for enough of an increment in nutrient output to feed 50 million people more than had been fed in 1943—at the levels of consumption in terms of calories, proteins, minerals and other nutrients which prevailed in the U. S. early in 1944.<sup>33</sup>

### 5. ACREAGE ADJUSTMENT GOALS

The primary focus of agricultural mobilization efforts was attainment of the annual production goals which were established at first by the Department of Agriculture and later by the War Food Administration. As the official definition of output objectives, these were publicized intensively through frequent speeches, news releases, interim progress reports, and local meetings throughout the rural areas. Nevertheless, the effectiveness of the guidance which they offered was marred by weaknesses in the means used for setting the goals as well as by continuing misconceptions among farmers and the public at large about the nature of these production targets.

Production goals might have been defined at any of several levels, each of them capable of useful application. At one extreme, goals might have been determined by total requirements for agricultural products, thus emphasizing the breadth of the gap between needs and current production, and permitting ready measurement of progress toward re-

<sup>33</sup> Testimony by Dr. Howard R. Tolley, Chief of the Bureau of Agricultural Economics in *House Hearings on Agriculture Department Appropriation Bill, 1945*, p. 141.

ducing this gap. Somewhat diminished in scale, goals might have represented estimated maximum production potentials—as determined by the supply of production factors and by the physical possibilities of increasing their contribution through reallocating them crop-wise and inter-regionally—thereby highlighting continued shortcomings in the effective harnessing of available resources. At the lower extreme, goals might have reflected little more than a comprehensive estimate of probable output, and even these would at least have helped transportation, processing, marketing and consumer groups to plan adjustments in accordance with anticipated shifts in the flow of farm products. And goals designed to represent the “realistic”, “practicable,” or “feasible” maximum might have been established at any level along the broad continuum between the theoretical maximum and the minimum of probable output, depending on the evaluation made of the effectiveness of the measures that could be taken by the government to overcome the momentum of established farming patterns.

Misconceptions about the nature of official goals were rooted in the fact that no one of these alternative bases for establishing goals could have served such a variety of ends satisfactorily. Once it was decided to issue but a single set of goals, only a precise definition of what they represented could have minimized the dangers of misinterpretation by at least some of those who sought guidance from these determinations. But the voluminous informational outpouring dealing with goals was singularly obscure on this score. The resultant uncertainty about the precise basis for determining annual goals was even reflected among agricultural officials in Washington, if, indeed, it did not derive from them.<sup>34</sup> At any rate, among the misconceptions bred by this deficiency, the most common

34 For example, E. D. White, Chief of the Conservation Programs Branch of the Food Production Administration, emphasized before a Congressional committee in February 1943 that most goals were determined by total requirements, including the needs of our allies, and that the “some” which did fall short of requirements were “set to the maximum capacity to produce” (*House Hearings on Agriculture Department Appropriation Bill, 1944*, pp. 719, 721.) On the other hand, a perceptibly more limited conception of the scale of goals emerged from the following explanation by J. Joe Reed, an official of the Agricultural Conservation and Adjustment Administration, in that same month’s issue of the *Journal of Farm Economics*: “In so far as it is possible to estimate the feasible amounts of agricultural commodities to be produced in 1943, they are represented by the announced production goals... some goals are established with the hope that they will be exceeded and others with the hope that they will not be exceeded... It will be noted that some goals essentially are estimates of the production that may be expected under conditions which probably will obtain during the coming year.” (“Techniques for Achieving Agricultural Production Goals for 1943”, pp. 84-85.)

was probably that goals actually described total requirements. To cite but one of the serious effects of this erroneous assumption, it, combined with the apparently reasonable progress achieved toward fulfilling the official goals, undoubtedly served to restrain public pressure for an intensification of agricultural mobilization; whereas the highlighting of shortcomings relative to actual needs might well have had a salutary contrary effect.

Turning to a consideration of the merits of alternative bases for the determination of goals, it should be noted at the outset that the fundamental purpose of goals was to spearhead a determined, far-reaching, organized effort to achieve the greatest possible progress toward meeting total requirements. The task was defined by the fact that the needs of domestic and foreign claimants could have been satisfied, merely in terms of nutrients rather than of the foodstuffs which they sought, only through substantial alteration of the composition of U. S. agricultural output, whereas farmers, the distributors and processors of such produce, and consumers, too, had a decided preference for the retention of past patterns of production—although thoroughly in favor of expanding output within that general framework. Some measure of compromise was, of course, inescapable. But, in view of the fundamental commitment of this government to maximize its aid to allied and liberated nations during the emergency, it seems reasonable to conclude that goals should have been determined on whatever basis ensured the heaviest and most unremitting pressure for maximum achievement.

As among the alternatives which have been discussed, either needs or maximum potentials would have been relatively clear-cut in concept, would have involved comparatively objective determinations, and would have provided continuous emphasis on the gaps to be overcome. "Feasibility" as a basis for the determination of goals, on the other hand, seemed to be a very much more elastic concept, to be more completely a product of the subjective judgment of agricultural officials, and to concentrate attention on intermediate tasks whose magnitude could not readily be interpreted in relation to the scale of actual requirements. The resulting sensitivity of the annual goals to outside pressures and to considerations of expediency undermined their utility as badly needed aids to the exercise of vigorous leadership. Bold proposals for conversion, as distinguished from general increases, might possibly have been sustained if goals had been based directly on total requirements, or if supplementary goals describing such needs had been issued along with goals for each year; for in either case incontestable need, widely publicized, would have

strongly bolstered agricultural officials seeking to withstand the powerful pressures generated by effective lobbies. In contrast, the strong consideration given to the preferences of organized producer and distribution interests, which is a primary determinant of feasibility, threatened that in the absence of effective safeguards goals would not only be set at comparatively modest levels in the early years, but that they would also be adjusted progressively to reflect an increasing weight to such preferences at the expense of the dictates of need.

Another function served by goals also had a significant bearing on the relative merits of alternative bases for determining them. By defining necessary tasks, which were then given intensive publicity, goals simultaneously established the very criteria by which the effectiveness of current mobilization policies, as well as of the officials charged with administering the program, would be measured. Here, then, was another factor reinforcing the tendency, noted above, toward narrowing any obtrusive gap between results and goals by lowering the latter to whatever extent was made possible by the latitude allowed for the subjective judgment of these officials in establishing target levels. There was little motivation in any case for officials to raise to the highest possible limits the standards by which their performance would be judged. Accordingly, the dominant influence of subjective judgments in the determination of feasible potentials obviously rendered this basis for setting annual goals more attractive to many administrative officials than the more objective bases which have been discussed.

It should be added at this point—though without slighting its significance for the larger problems of organizing a system of planning which is both effective and also responsive to grass-roots thinking—that giving heavy weight to the views of state and local agricultural committees reinforced the tendency to drop target sights to well within the lower reaches of feasible potentials; for in the absence of strong leadership clearly focussed on aggregate needs at the national level, the palpable advantages of such field consultation was partially offset by the resulting augmented weight given to narrowly localized preferences.

Despite the serious shortcomings threatened by the adoption of the feasibility basis for determining the targets that were to spearhead the conversion effort, an examination of actual wartime goals indicates that, in general, these did fall within the range encompassed by "feasible" potentials. Thus, while most production targets fell materially short of

needs and estimated maximum potentials on the one hand,<sup>35</sup> they did at least propose a number of changes relating to specialized war needs which could not have been expected to result from wholly unguided decisions of farmers. Although feasibility seemed to best describe the central thrust of production goals, this should not be taken to have precluded substantial variation in the extent of the adjustments proposed for the numerous individual crop and livestock products encompassed by the annual schedule of goals. In agricultural production goals, as in any program of government planning which has serious import for the well-being of a wide array of enterprises, analytically derived desiderata were necessarily subject to modification in accordance with the relative strength which the various affected groups could muster in defense of their several special interests. Hence, some of the goals will be seen to have approached the scale of maximum potentials, especially where these coincided with producers' desires to expand, while others may fairly be rated as having fallen short even of feasible levels of adjustment.

Whatever the safeguards that may have been introduced to minimize the possible deleterious effects of basing the determination of production objectives on administrative estimates of feasible potentials, the acreage goals actually issued during the war were characterized by an untoward restraint in the scale of suggested adjustments, by a progressive shrinking back of goal levels as the emergency wore on and needs rose, and by a studied avoidance of vigorous conversion proposals throughout the period of mobilization.

The relatively unhurried pace of readjustments proposed by the government is illustrated by the fact that, as shown in Table 11, a crop by crop comparison of each year's goals with those established for the preceding year reveals that more than three-fourths of the changes introduced were smaller than 15 percent. The degree of caution thus evidenced is magnified by the fact that the initial wartime goals to which these succeeding comparisons were linked had themselves represented not a far-reaching break with the actual acreage pattern in 1941, but merely the same modest scale of modifications as prevailed thereafter.

<sup>35</sup> In a report released to the public on January 21, 1943, the Special Senate Committee to Investigate the National Defense Program offered the opinion that the 1943 agricultural production goals did not even provide for an adequate reserve against a bad crop year, to say nothing of providing for the accumulation of stockpiles out of which to feed the starving people in liberated areas. (*Interim Report on Farm Machinery and Equipment*, U. S. Government Printing Office, 1943, p. 2.) Before resigning as Director of the Food Production Administration early in 1943, Herbert W. Parisius stated that 1943 production goals should have been raised at least 20 percent above announced levels.



A steady lowering of target sights is also revealed by these same comparisons. Compared with actual acreages in 1941, the 1942 goals proposed increases of more than 10 percent in the case of 8 crops and decreases for only three. During the following years each newly issued schedule of goals called for more decreases, as compared with their immediate predecessors, and for fewer increases of more than 10 percent. Thus, in a comparison of the goals for 1945 with those for 1944, recommendations of decreases may be noted in the case of 12 crops, and increases of more than 10 percent in only one instance.

Inasmuch as the possible extent of the conversion of land and attendant production factors to new crops was limited by the volume of such farm resources released through the curtailment of crops designated as dispensable, it is readily apparent that in this respect, too, the leadership provided by goals was distinguished neither for vigor nor even for consistency. As compared with actual acreages in 1941, the goals for 1942, which might have been expected to delineate the major species of adjustments necessitated by the war, proposed increases for all crops, except for reductions of 12 percent for wheat, 4 percent for oats and less than one percent for rye. These three reductions, if effectuated, would have released for conversion only 2.6 percent of the total acreage cultivated in 1941. The total additional conversion proposed in the 1943 goals, as compared with the preceding goals, was of the same minute proportions, involving reductions of 7-10 percent for cotton, truck crops to be marketed fresh, and oats, and 3-5 percent for wheat and tame hay.

Shortcomings relative to conversion potentials were noticeable in respect to the direction as well as the scale of adjustments recommended in the annual goals. Thus, the goals for 1942 proposed increases in the acreage devoted to cotton and tobacco, instead of shifts away from them in favor of crops which would augment prospective food supplies. At the same time, instead of pressing for a shift from feedstuffs to crops for direct human consumption, these initial wartime goals suggested a decrease in the acreage of food grains and an increase of almost equal size in the combined acreage of feed grains and tame hay. If such disregard of the means of maximizing the output of needed nutrients had been limited to the 1942 goals alone, it might have been dismissed as attributable to the still embryonic state of war pressures. But the reaffirmation of these same patterns of change in the 1943 goals as compared with those for 1942, with the single exception of the proposed decrease in cotton acreage, suggests that indifference to the pursuit of conversion potentials was already deeply rooted in the goal-setting process.

Production goals for 1944 and 1945 not only completed the process of abandoning serious conversion efforts but also emphasized the cutting back of output objectives for the very crops whose expansion had been pressed most intensively during the early years of the war. Of the five crops for which acreage reductions had been suggested in the 1943 goals as compared with 1942 goals, the 1944 goals proposed increases for all except cotton, and even the latter was to be decreased by less than one percent. On the other hand, the crops for which goals in 1944 were lower than in 1943 included rye, barley, sugar beets, sugar cane, dry beans and peanuts. The total reduction proposed for these crops, including cotton, came to less than one percent of the acreage cultivated in 1943. Nor was even this tiny magnitude the measure of proposed conversion, inasmuch as the goals for rye and sugar cane were raised again the following year, and inasmuch as the reductions affecting peanuts and dry beans actually represented the shrinking back of earlier conversion proposals. The 1945 goals were dominated by this trend toward the contraction of output objectives for the so-called war crops. Compared with the goals for 1944, the new goals proposed reductions of 20-50 percent in the acreage of dry beans, dry peas, soybeans, peanuts and sweet potatoes, reductions of 8-15 percent for rice, potatoes and flaxseed, and minor reductions for truck crops.

Summarized by commodity groups, the goals for 1944 and 1945 reflected one apparently major contribution toward maximizing nutrient production: the intensive pressure for increased food-grain acreage which was traceable to a sharp reversal of previous official recommendations for curtailment of the wheat crop. And yet, although such a motive may, indeed, have been a factor in determining the proportions of the proposed expansion, it seems probable that even more influential considerations were the mounting pressure of farmers in the major wheat-growing areas to share more fully in the growing agricultural prosperity, as well as the official desire to augment the supply of feedstuffs for livestock production by taking advantage of the adaptability of wheat to such ends. This latter view is supported by the steady decline in carry-over supplies of feed grains, by heavily increased resort to the feeding of wheat, and by the extraordinary jump in wheat imports.<sup>36</sup> The over-riding concern

36 Carry-over supplies of feed grains declined from 23.3 million tons at the beginning of crop year 1941 to 16.7 million tons two years later, a trend which was accelerated during the ensuing year. (*Agricultural Outlook Charts—1946*, p. 70.) The volume of wheat used for feed more than quadrupled between the crop years 1941 and 1943, accounting during the latter period for almost as much wheat as direct food products. (*Ibid.*, p. 39.) Wheat imports, which fluctuated between 300,000 bushels and 3.7 million bushels during 1937-42, rose to 136 million bushels during the crop year 1943. (*Ibid.*, p. 38.)

with feedstuffs is also evident from the fact that wheat, feed grains and tame hay accounted for 90 percent of the acreage increases proposed in the 1944 goals as compared with the goals for the preceding year.

Turning to the pattern of adjustments proposed for individual crops through the official goals, it may occasion some astonishment to note that, in the face of swelling overseas need for foodstuffs, goals rose steadily during 1942-1945 in respect to only one crop, tobacco. In the case of rice, dry peas, corn, soybeans, flaxseed, potatoes and sweet potatoes, annual goals increased in 1943 and again in 1944, only to decline in 1945. Efforts to increase the acreage of peanuts, dry beans and barley were even more short-lived, for the reduction of these goals was initiated in 1944 and continued in the next year. Except for wheat and oats, whose expansion was encouraged during 1944 and 1945 after previous efforts to reduce their cultivation, the goals set for the remaining major crops fluctuated within narrow limits during the war.

In short, one of the predominant features of the agricultural production strategy reflected in official goals seems to have been a slurring over of the huge conversion potentials requiring significant readjustments in the pre-war patterns of crop production; instead, emphasis was placed on the more conciliatory policy of concentrating primarily on the appropriate allocation only of the wartime increments in total cultivated acreage. A second characteristic of such strategy, occasioned but not entirely justified by the continued rise in livestock numbers, was an apparent commitment to the expansion of feedstuffs vigorous enough to have encouraged the allocation to such crops of the bulk of newly added acreage. In addition, the sharp cutbacks proposed in the goals for 1945 certainly suggest that leading mobilization officials believed that the peak of requirements had already been passed.

#### 6. ACTUAL RESULTS COMPARED WITH ACREAGE ADJUSTMENT GOALS

Before exploring the relationships between established goals and final results, attention should be directed to the general patterning of the acreage adjustments which actually emerged. Foremost in this connection is the contrast, already noted in the preceding chapter, between the broad advances achieved during 1942 and 1943 and the ebbing which dominated the succeeding two years. To illustrate: among the crop categories listed in Table 11 there were 32 cases in which the actual acreage in 1942 and in 1943 exceeded that of the preceding year compared with 11 instances of reduction, whereas during 1944 and 1945, reductions actually outnumbered increases 23 to 18. Moreover, the effect of this reversal was

TABLE 11  
WARTIME ACREAGE GOALS, ACTUAL RESULTS AND ESTIMATED MAXIMUM POTENTIALS, 1941-45  
Index numbers of planted acreage (1942 actual acreage = 100)

Index numbers of planted acreage (1912=100)														
Crop Categories	Acreage 1942 Actual	Index Numbers										Maximum potentials <sup>1</sup>		
		1940 Actual	1941 Actual	1942		1943		1944		1945		Actual	Esti- mate B	Estimates C and D
				Goal	Actual	Goal	Actual	Goal	Actual	Goal	Actual			
Food Grains and Pulses (1,000 acres)														
Wheat .....	52,227	118	119	105	100	101	105	128	125	130	132	125	125	123-7
Rye <sup>2</sup> .....	3,860	83	92	92	100	93	71	62	58	65	51	...	...	84
Rice .....	1,483	74	85	89	100	93	102	103	101	95	102	...	...	114
Dry beans .....	2,098	99	107	124	100	157	127	145	105	108	84	212	212	158
Dry peas .....	519	58	69	128	100	140	160	172	141	88	102	256	256	238
Feed Grains and Forage														
Corn .....	90,552	98	97	103	100	105	107	111	109	109	102	108	108	108
Oats <sup>3</sup> .....	42,595	92	98	94	100	88	100	93	100	104	106	89	91	91
Barley <sup>3</sup> .....	19,536	80	80	82	100	92	89	89	72	71	59	97	97	94
Grain sorghums .....	9,708	117	98	103	100	124	131	...	...	...	...	108	108	...
All sorghums, except syrup .....	15,826	133	117	...	100	...	109	106	114	108	99	...	...	103
Tame hay <sup>2</sup> .....	60,117	100	99	101	100	98	101	104	99	104	100	111	111	112 <sup>4</sup>
Oil and Fiber Crops														
Soybeans, for beans <sup>2</sup> .....	10,008	48	59	90	100	120	107	137	104	108	109	154	154	154 <sup>4</sup>
Flaxseed <sup>3</sup> .....	4,715	71	74	95	100	116	133	125	64	106	86	135	135	123-4
Peanuts, picked and threshed <sup>2</sup> .....	3,439	59	56	145	100	160	105	144	92	94	93	265	265	224 <sup>4</sup>
Cotton, in cultivation July 1 .....	23,302	107	99	107	100	97	94	96	87	88	76	84	84	96

TABLE 11—(Continued)  
Index numbers of planted acreage (1942 actual acreage = 100)  
WARTIME ACREAGE GOALS, ACTUAL RESULTS AND ESTIMATED MAXIMUM POTENTIALS, 1941-45

Crop Categories	Acreage 1942 Actual	Index Numbers										Maximum potentials <sup>1</sup>	
		1940 Actual	1941 Actual	1942		1943		1944		1945		Esti- mate B	C and D
				Goal	Actual	Goal	Actual	Goal	Actual	Goal	Actual		
Sugar Crops	(1,000 acres)												
Sugar beets <sup>3</sup> .....	1,048	93	76	...	100	100	59	91	61	91	74	44	84
Sugar cane, except syrup <sup>2</sup> ....	317	85	91	...	100	107	97	102	93	106	95	104	103
Vegetables													
Potatoes <sup>3</sup> .....	2,789	104	99	110	100	117	123	126	108	112	104	167	168
Sweet potatoes .....	710	92	105	120	100	141	128	149	109	118	101	249	224-6
Truck crops for fresh market <sup>2</sup> .....	1,662	102	102	111	100	101	95	102	113	101	114	147	126
Truck crops for processing ....	2,098	66	78	99	100	...	101	105	98	103	99	136	118
Tobacco <sup>2</sup> .....	1,377	102	95	109	100	111	105	127	127	131	134	83	105 <sup>5</sup>

NOTE: Other crops for which acreage goals were set but which are not included above: hemp fiber and seed, flax fiber, broom corn, cover crop seeds and hay seeds.

<sup>1</sup> For source of estimates B, C and D see Table 10.

<sup>2</sup> Harvested acreage.

<sup>3</sup> Includes acreage planted in Fall for harvest in succeeding Spring.

<sup>4</sup> From estimate C alone because different base used in setting goal in estimate D. (See Table 10.)

<sup>5</sup> From estimate D alone because different base used in setting goal in estimate C. (See Table 10.)

Source: Based on Office of Requirements and Allocations, *Table of Acreage Goals with Comparisons*, U.S. Department of Agriculture, mimeographed, April 30, 1946.

intensified by its concentration among the relatively heavier adjustments, as indicated by the fact that increases of more than 10 percent declined in number from 14 during 1942 and 1943 to only 5 during the succeeding two years, while decreases of more than 10 percent rose from 5 during the earlier two years to 14.<sup>37</sup> The extent of the retreat may be gauged from the fact that in 1945 only 6 of the major crop categories covered in Table 11 occupied a greater acreage than they had as early as 1942, while 11 had shrunk below even that level.

Another outstanding characteristic of wartime adjustments in land use was the singular stability of the pre-war pattern of acreage allocations among the principal crop groups. Of course, a number of individual crops

TABLE 12  
RELATIVE DISTRIBUTION OF TOTAL ACTUAL CROP ACREAGE BY MAJOR GROUPS, 1941-45  
Planted acreage except where otherwise indicated

Crops	1941	1942	1943	1944	1945
	%	%	%	%	%
Corn .....	25.3	25.8	26.8	27.1	26.0
Oats, <sup>1</sup> barley, <sup>1</sup> and all sorghums except syrup	22.0	22.3	21.5	20.7	20.2
Tame hay <sup>2</sup> .....	17.1	17.2	16.9	16.4	16.8
<i>Total of above feed grains and hay</i> .....	<i>64.4</i>	<i>65.3</i>	<i>65.2</i>	<i>64.2</i>	<i>63.0</i>
Wheat .....	18.0	14.9	15.3	18.0	19.2
Rye <sup>2</sup> and rice .....	1.4	1.5	1.2	1.0	1.0
<i>Total of above food grains</i> .....	<i>19.4</i>	<i>16.4</i>	<i>16.5</i>	<i>19.0</i>	<i>20.2</i>
Potatoes <sup>1</sup> and sweet potatoes .....	1.0	1.0	1.2	1.0	1.0
Truck crops for fresh markets <sup>2</sup> and for processing .....	1.0	1.1	1.0	1.1	1.1
<i>Total of above vegetables</i> .....	<i>2.0</i>	<i>2.1</i>	<i>2.2</i>	<i>2.1</i>	<i>2.1</i>
Dry beans and peas .....	0.7	0.8	0.9	0.8	0.7
Sugar beets <sup>1</sup> and sugar cane except syrup <sup>2</sup> ..	0.3	0.4	0.3	0.3	0.3
Soybeans for beans, <sup>2</sup> flaxseed <sup>1</sup> and peanuts picked and threshed <sup>2</sup> .....	3.3	5.2	5.8	4.6	5.0
Cotton, in cultivation July 1 .....	6.7	6.7	6.1	5.6	5.0
Tobacco <sup>2</sup> .....	0.4	0.4	0.4	0.5	0.5
<i>Total for all crops listed above</i> .....	<i>97.2</i>	<i>97.3</i>	<i>97.4</i>	<i>97.1</i>	<i>96.8</i>
<i>Total acreage of 52 principal crops planted or grown</i> .....	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

<sup>1</sup> Includes acreage planted in Fall for harvest in succeeding Spring.

<sup>2</sup> Harvested acreage.

Source: Based on *Table of Acreage Goals with Comparisons*.

37 Percent Change in Actual Acreage Compared with Preceding Year, By Number of Crops Affected, 1942-1945, For Crops Listed in Table 11.

	1942	1943	1944	1945	Total
Increase by more than 10 percent .....	8	6	3	2	19
Increase by less than 10 percent .....	9	9	3	10	31
No change .....	0	1	1	0	2
Decrease by less than 10 percent .....	3	3	6	3	15
Decrease by more than 10 percent .....	2	3	8	6	19
	<u>22</u>	<u>22</u>	<u>21</u>	<u>21</u>	<u>86</u>

Source: Based on Table 11.

experienced gains or losses of significant proportions, most notably dry peas, soybeans, rye and barley, and to a lesser degree flaxseed, tobacco, cotton and wheat. Because of the relatively small acreage devoted to most of these exceptions, however, it will be seen from Table 12 that over-all changes in the distribution of cropland were not only of the slightest from year to year, but that, despite the cumulation of these changes over several years, the distribution of such acreage in 1945 still bore a striking resemblance to that which had prevailed in 1941. Indeed, the picture is one of virtual immobilization.

Comparison of these actual results with official goals represents a measure of performance in the third major stage of planning—subsequent to those reflected in the earlier comparisons between needs and estimated maximum potentials and then between estimated potentials and goals. Goals, of course, defined not only specific acreage objectives for the individual crops, but also a specific pattern of relative adjustments among them. In addition to the substantial disparities which have already been noted between the scale of needs and the projected reach of goals, however, further serious gaps are found between goals and actual results, bearing not only on the level of achievement but even more heavily on the patterning of land use adjustments.

The actual acreage of principal crops was significantly below goals with greater frequency than goals were surpassed. Moreover, such shortcomings grew more predominant during the latter half of 1942-45. Thus, during the first two years of this period, the actual acreage of crops listed in Table 11 was more than 2 percent below their respective goals in 21 instances and exceeded goals by more than 2 percent in 14 cases, whereas during the succeeding two years deficiencies outnumbered excesses by 27 to 6.<sup>38</sup> The increasing frequency with which actual acreages were less than goal acreages would have been less serious had it been attributable to either of two possible causes: to a lagging response accompanying a marked acceleration in the rate of expansion sought by goals; or to the

38 RATIO OF ACTUAL ACREAGE TO GOALS FOR THE SAME YEAR, 1942-45

For crops listed in Table 11.

	1942	1943	1944	1945	Total
Actual acreage short of goals by 10 percent or more . . .	6	6	10	8	30
Actual acreage short of goals by 3-9 percent . . . . .	5	4	4	5	18
Actual acreage within 2 percent above or below goals ..	2	2	4	5	13
Actual acreage larger than goals by 3-9 percent . . . . .	3	4	2	1	10
Actual acreage larger than goals by 10 percent or more	3	4	1	2	10
Total . . . . .	19	20	21	21	81

Source: Table 11.

overfulfillment of more numerous official requests for decreases in crop acreage in order to promote more conversion. But neither of these mitigating circumstances applied. Goals proposed only the same number of reductions during 1944-45 as in the two preceding years. At the same time, the scale of increases sought actually diminished: proposals for increases of more than 5 percent above the actual acreage of the preceding year declined from 23 to 14 between 1942-43 and 1944-45, while proposals for increases of less than 5 percent rose in number from 6 to 17.<sup>39</sup>

Disparities between objectives and performance were even greater in respect to the magnitude of acreage adjustments. Comparison of each year's goals and of each year's results with the actual acreage of the preceding year reveals that differences between the extent of changes proposed and those which were effected can be considered insignificant in only 13 of the 81 pairs of crop goals and results presented in Table 11.<sup>40</sup> In the remaining 68 cases, or 84 percent of the total, actual changes were at least 25 percent greater or smaller than had been proposed by goals, and in 58 of these cases actual changes were at least 50 percent greater or smaller than had been proposed—including 27 cases in which acreage shifts were in the opposite direction from that recommended by goals. In 1942 and 1943, the upsurge of agricultural productive efforts was reflected in the fact that of 28 requests for acreage increases included in the annual goals, 8 were surpassed by more than 25 percent and only 5 resulted in net reductions. In 1944 and 1945, however, despite the fact

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## SCALE OF ACREAGE ADJUSTMENTS PROPOSED BY GOALS

Ratio of goal acreage to actual acreage in preceding year for crops listed in Table 11

	1942	1943	1944	1945	Total
Increase of more than 5 percent proposed ..	13	10	9	5	37
Increase of less than 5 percent proposed ...	3	3	7	10	23
No change proposed .....	0	1	1	1	3
Decrease of less than 5 percent proposed ...	2	2	1	2	7
Decrease of more than 5 percent proposed .	1	4	3	3	11
Total .....	19	20	21	21	81

Source: Table 11.

<sup>40</sup> Disparities were not considered to be of significant proportions either when the actual adjustment was less than 25 percent greater or smaller than had been proposed, or when goals proposed an adjustment of 5 percent or less and comparison, on an absolute basis, showed the percent change effected to have been no more than two percentage points greater or smaller than the percent change proposed. The conservativeness of this latter criterion may be illustrated by noting that in the case of a proposed increase of one percent the resulting adjustment would not be rated as significantly disparate if it fell anywhere within the range between an increase of 3 percent and a decrease of one percent. Yet of the 13 disparities appraised as insignificant, 9 were included as a result of applying this more conservative of the two standards.



that the rate of expansion sought had been scaled down, of 31 requests for acreage increases, only 1 was surpassed by more than 2 percent, while no less than 15 resulted in actual reductions. Although the character of significant disparities between goals and results varied in the manner just described, the total frequency of such disparities was virtually as high during 1944 and 1945 as it had been during the preceding two years. Accordingly, little agreement is discernible between the proposed patterning of adjustments and the actual outcome in either half of the 1942-45 period.<sup>41</sup>

Attention may also be directed to the extent to which goals and results influenced one another. If goals had been determined primarily by domestic and foreign requirements, shortcomings in performance would not have affected goal levels, except perhaps to counsel compensatory increases in subsequent targets. Indeed, an expanding gap between goals and needs would have directed attention to the inadequacies of current policies and administrative measures relative to the demands made upon them. By basing the determination of goals on "feasibility" instead of on needs, however, it was apparent that results would exert a reciprocal influence on goals, certainly of major and possibly of dominant proportions.

Even a crude level of analysis of the association between adjustments proposed by goals and those which actually emerged demonstrates a sharp decline in their conformity during the latter half of the period 1942-45. During 1942 and 1943, actual adjustments failed to follow the direction of change proposed in but 10 cases out of the 39 given in Table 11, whereas the relative frequency of such blatant disparities was virtually doubled during the following two years, when they numbered 20 out of

<sup>41</sup> RELATION OF ACTUAL ACREAGE ADJUSTMENTS TO PROPOSALS, 1942-45

Comparison of percentage change resulting with percentage change proposed by annual goals for crops listed in Table 11.

	1942-43	1944-45		1942-43	1944-45
<i>Increase proposed</i> .....	29	31	<i>Decrease proposed</i> .....	9	9
Actual increase at least 25% greater than proposed .....	8	1	Actual decrease at least 25% greater than proposed .....	4	4
Actual result not significantly different from proposal .....	4	9	Actual decrease at least 25% less than proposed .....	1	2
Actual increase at least 25% less than proposal .....	12	6	Actual result was increase .....	4	3
Actual result was decrease .....	5	15	<i>No change proposed</i> .....	2	1
			Actual result was substantial decrease .....	2	1

Source: Table 11.

42 cases.<sup>42</sup> At the same time, evidence accumulated of the growing importance of considerations other than need in the formulation of the actual annual crop acreage goals. For example, it has already been noted that the rate of expansion sought by goals was progressively reduced after 1942.<sup>43</sup> More serious still, the absolute level of most crop goals reached a peak prior to 1945, although total needs were expected to continue rising not only through that year but for at least one year beyond it. Of the 21 principal crops listed in Table 11, goals reached their peaks in 1945 in only 4 cases, 8 reached their peaks in 1944, and 7 as early as 1943.<sup>44</sup> The significance of these premature retreats in the drive for maximum food production is suggested by the fact that the goals which reached a peak in 1943 or earlier included those for sugar cane and sugar beets, peanuts, truck crops to be marketed in an unprocessed condition, and dry beans. Of course, such reductions in goal levels would have been justified by unexpected surpluses of supply relative to demand, or by belated determinations that some crops were much less valuable for war purposes than had originally been supposed. But neither of these explanations was sustained in relation to most of the crops for which goals reached a peak prior to 1945. On the other hand, a more cogent alternative is suggested by the fact that even as the correlation between goals and consequent results faded, that between actual performance and succeeding goals grew notably closer.

Analysis of the influence of goals and results on one another suggests that although goals properly exerted the greater effect during the early years of mobilization, the relation between these two factors was subsequently reversed. Thus, the frequency with which actual acreage adjustments conformed to the direction of change proposed by corresponding goals was almost halved between 1942 and 1943 as compared with the following two years, dropping from 25 cases out of the 39 listed in Table

42 These totals are based on a summation of the following 3 categories in the preceding footnote: increase proposed, decrease resulted; decrease proposed, increase resulted; and no change proposed, but substantial decrease resulted.

43 See summary of scale of adjustments proposed by goals in footnote 39 preceding.

44 As shown in Table 11 crop goals reached their 1942-45 peaks in the following years:

1945—wheat, oats, tobacco, hay;

1944—rice, corn, soybeans, flaxseed, dry peas, potatoes, sweet potatoes and truck crops for processing;

1943—dry beans, peanuts, sugar beets, sugar cane, rye, barley and sorghums;

1942—truck crops for fresh markets and cotton.

11 to only 16 out of 42.<sup>45</sup> At the same time, whether new goals were to exceed or to fall short of their predecessors seemed to be determined with increasing frequency by whether the preceding goals had been exceeded or undershot by resulting acreage adjustments—instances of such conformity rising from 9 cases out of 18 in the relation between 1943 goals and 1942 performance, to 30 cases out of 40 during the next 2 years.<sup>46</sup> Indeed, it will be seen from these data that past performance seemed to exert an even greater influence on new goals during the latter half of 1942-45 than goals had exerted on corresponding results during the earlier half of this period. Here then is some further measure of the extent to which the adoption of "feasibility" as the basis for formulating goals attenuated their relationship to actual needs, and thereby minimized the significance of performance relative to goals as a measure of mobilization achievement.

In order to round out the foregoing discussion of the general relationship between goals and results, some attention will be directed to these relationships on the level of individual crops. By way of introduction, it should be noted that the patterns of acreage adjustments affecting the principal crops under consideration between 1941 and 1945 bore little resemblance to one another. Despite the array of farm products officially referred to as war crops, and hence subject to pressure for expansion, acreage was expanded in all four years in the case of only one crop, and even this accomplishment was of questionable value to the fulfillment of mobilization objectives inasmuch as the crop involved was tobacco. Moreover, only one crop was significantly increased in acreage for even three successive years during this period: corn—a crop which has already been seen to rank below many others in its efficiency as a convertor of farm resources into needed nutrients. Inasmuch as no crop at all was reduced in acreage every year, the remaining 19 crops encompassed a wide diversity of combinations of increases and decreases during this period.

To facilitate summarization, the patterns of wartime acreage adjustment experienced individually by the major crops, and detailed in Table

45 Specifically, these results were obtained by comparing the goal and the resulting acreage for each crop annually during 1942-45 with the actual acreage of that crop during the preceding year.

46 These findings resulted from comparing the ratio of actual acreage to the corresponding goal acreage for each crop annually with the ratio of that same goal to the corresponding goal for the succeeding year. Thus, according to this view, it would be expected that when actual adjustments fell short of the goals which had been established, the goal would be reduced for the following year regardless of what changes may have taken place in the scale of needs.

II, may be classified into four categories. Of the 14 crops whose acreages were greater in 1943 than in either of the preceding years, one group—composed of corn, oats, sorghums, rice, soybeans and tobacco—reached even higher peaks in 1944 or 1945, while those in the second—including dry beans, dry peas, flaxseed, peanuts, potatoes, sweet potatoes, truck crops for processing and tame hay—contracted in acreage to below their 1943 levels in each of the following two years. Only wheat and truck crops for fresh markets belong to the third group: crops whose acreages were greater in 1941 than in 1942 or 1943, but which were expanded so sharply thereafter as to exceed their 1941 peaks in 1944 and again in 1945. The last group, consisting of crops which reached acreage levels in 1941 or 1942 which were not even equalled during the remaining three years of the war, includes rye, barley, sugar beets, sugar cane and cotton.

As in the general discussion of such relationships, this crop by crop review of the relationship between goals and results will be concerned first with the deficiencies in actual acreage levels relative to goals, then with disparities between the patterns of adjustment proposed and those which materialized.

One index of the insufficiency of wartime acreage gains is that whereas only the 8 crops in the first and third categories given above exceeded their 1943 acreage levels during the latter half of the mobilization period, annual goals had sought such further increments in the case of 17, or all but flaxseed, sorghums, rye and barley. The pervasiveness of such shortcomings is also evident from the fact that while actual acreage exceeded annual goals by at least 2 percent in either three or all four years during 1942-45 only in the case of oats and rice, deficiencies of at least 2 percent were recorded with this same frequency for cotton, sweet potatoes, dry beans, sugar beets, sugar cane, rye, corn, barley, peanuts and potatoes. A similar disproportion may be noted in the fact that while only dry peas, flaxseed and truck crops for fresh markets exceeded acreage goals in 2 years out of the four under consideration, results fell significantly short of goals with this frequency not only for the same three crops, but also for wheat, soybeans, tobacco, tame hay, and truck crops for processing. Incidentally, this emphasis on the direction of deviations rather than on the relative frequency of disparities and conformities is necessitated by the melancholy finding that only in the single case of tobacco did actual acreage come within 2 percent of annual goals even twice during 1942-45.

It will be recalled that comparison of the changes proposed with those realized—as distinguished from the foregoing comparison of the total acreages sought and attained—also reflects unfavorably on the effectua-

tion of the mobilization program's officially announced objectives. During 1942-45, acreage adjustments were at least in the same direction as advocated by goals, although frequently of very different proportions, in all four years only for tobacco and flaxseed; and in three years out of four in the case of wheat, corn, sorghums, dry peas, peanuts and soybeans. The one additional instance in which deviations were less frequent than conformity was in the case of sugar beets, where the direction of change agreed with proposals in two years out of three. Adjustments in the acreage of rye, rice, barley and tame hay were in substantial disagreement with goal recommendations as often as in agreement. For the remaining crops listed in Table 11, including dry beans, oats, cotton, potatoes, sweet potatoes, truck crops for fresh markets, sugar cane, and truck crops for processing, deviations actually outnumbered instances of conformity by three to one, except for the latter two crops, for which this ratio was two to one.

More important still, the crop by crop comparison of annual acreage goals and results in Table 11 underlines the progressive disappearance from official recommendations of early semblances of a coherent program for maximizing the production of needed nutrients and other basic war supplies. One evidence of such disregard of mobilization principles was that instead of using shortcomings in performance relative to goals as a measure of the need for intensifying acreage adjustment incentives and controls designed to fulfill requirements for specially designated war crops, mobilization officials merely cut back such presumably urgent annual goals so as to more nearly approximate production probabilities. For example, in the case of such officially designated war crops as dry beans, soybeans, peanuts and sweet potatoes, the increases sought by the highest goals established were thereafter reduced by two-thirds or more during the mobilization period, without any demonstration of proportionate declines in the need for these commodities.

Another aspect of the gradual abandonment of mobilization requisites was the diminishing pressure for expanding the acreage of foodstuffs and vegetable oils (other than cottonseed) faster or at least as rapidly as the acreage of feedstuffs (excluding wheat from both categories). Compared with actual crop acreages in 1941, the 1943 goals proposed an increase of 7.6 million acres in the land devoted to corn, oats, barley, sorghums and tame hay, or little more than half as much as the proposed increase of 14.4 million acres in the land allocated to rye and rice, dry beans and peas, soybeans, flaxseed and peanuts, sugar beets and cane, potatoes and sweet potatoes, and truck crops for fresh markets and for processing. This rela-

tionship was reversed during the latter half of the mobilization period as 1945 goals, compared with actual acreages in 1943, called for an increase of 2.2 million acres for the former and a decrease of 2.6 million acres for the latter. Even more fundamental among mobilization imperatives was the necessity for restricting the output of comparatively less essential products. Yet, the following summary case studies of the course of cotton and tobacco production during the war years offers further evidence of serious deviations between agricultural policies and a coherent strategy for maximizing mobilization achievements.

### *Cotton*

Several considerations served to buttress the case for substantially reducing the output of short staple lengths and low quality grades of cotton during the war in the interests of freeing scarce production resources for more urgently needed products: first, the unprecedented levels to which surpluses in these categories had already mounted by the outbreak of hostilities; second, the subsequent necessity to curtail inessential exports in general, and, particularly, to end all shipments to Japan—one of the major peacetime outlets for these cheaper categories of American cotton; and, third, the fact that the huge demands of our armed forces were officially acknowledged to be concentrated primarily on those cotton products which utilized the longer staple lengths and higher grades of fiber. Those who nevertheless actively resisted the contraction of such production sought to justify their opposition by emphasizing the serious shortage of vegetable oils, and the contribution to available supplies made by cottonseed. Even this seemingly plausible defense was rendered untenable, however, by the finding of the Agricultural Adjustment Administration, after comprehensive analysis, that, in most parts of the cotton producing region, both peanuts and soybeans yield far more oil and oilseed meal per acre and per man-hour than cottonseed.<sup>47</sup>

Further warrant for shifting resources away from the production of these categories of cotton was provided by the intensified demand for food. In launching his campaign for converting acreage then devoted to cotton, Secretary Claude Wickard remarked on September 29, 1941 in a speech delivered in Memphis, Tenn. that, "There's no sense in continuing to pile up cotton for a market which may or may not exist until after the war. There hasn't been a time since the early days of the depression when we didn't have too much cotton on hand. . . . The country needs milk and eggs and meat a lot worse than it needs more cotton." Similarly, Mr. R. L. Wingate, president of the Georgia Farm Bureau Federation, told a Congressional Committee:

<sup>47</sup> Table of Comparative Yields of Soybeans, Peanuts and Cottonseed in the South, submitted by Mr. I. W. Duggan, Director of the Southern Division, Agricultural Adjustment Administration, in *House Hearings on Agriculture Department Appropriation Bill, 1944*, p. 780.

"We cannot eat surplus cotton. We cannot eat tobacco.... We have got to grow food."<sup>48</sup>

Under these circumstances, an over-riding regard for the needs of mobilization would have counseled the vigorous adjustment of cotton production to requirements, reducing total output so as to ensure the liquidation of excessive carry-overs, increasing the average staple length of each new crop, and raising its quality level. Such was the character of the mobilization program, however, that an examination of actual results reveals little progress of note toward the attainment of any of these ends during the war, as may be observed in Table 13.

TABLE 13  
COTTON ACREAGE, PRODUCTION AND CARRY-OVER, 1940-45

YEAR	ACREAGE In cultivation on July 1	ANNUAL PRODUCTION			CARRY-OVER (as of August 1)		
		Total Volume	Grade Index <sup>1</sup>	Staple Length, Average	Total Volume	Grade Level (No. bales graded white middling or better)	Staple Length (No. bales of less than 1" staple)
	(1,000 acres)	(1,000 bales)		(32'ds of an inch)	(1,000 bales)	(1,000)	(1,000)
1940 ..	24,871	12,566	96.2	31.9	10,453	5,131	6,191
1941 ..	23,130	10,744	94.1	32.0	12,011	5,976	6,812
1942 ..	23,302	12,817	95.0	31.9	10,475	3,804	5,962
1943 ..	21,942	11,427	96.2	31.5	10,530	3,469	5,826
1944 ..	20,354	12,230	93.4	31.9	10,559	3,903	6,060
1945 ..	17,749	9,015	91.8	32.2	11,006	3,544	5,869

<sup>1</sup> Computed by weighting the quantity in each grade by the 1937-39 average price per pound for such grade of 15/16 inch staple. Converted to an index on basis middling white equals 100.

Source: *Agricultural Statistics—1945*, p. 79; *Agricultural Statistics—1946*, pp. 72, 80-82.

Even the progressive reduction of cotton acreage after 1942, which represented some contribution to the curtailment of output—although its effects were offset by increases in the yield per acre—could not be credited to government efforts despite the fact that acreage is more susceptible to control than crop production. Indeed, official cotton goals for each war year except 1943 sought increases rather than decreases relative to the actual acreage of the preceding year. Moreover, this single exception to the steady pressure for expansion was but short-lived. As early as February 6, 1943, Secretary of Agriculture Wickard asked cotton farmers "to plant as much of their 1943 cotton allotments as possible after meeting special war crop goals." Inasmuch as such allotments totalled more than 27 million acres in comparison with the official goal of 22.5 million acres, it was apparent that such advice could hardly be construed as a further effort to decrease new cotton plantings. Exactly one month later, Secretary Wickard announced "that farmers will

be permitted to exceed their 1943 cotton acreage allotments by 10 percent but that cotton marketing quotas will be retained." On July 10, the Secretary took the further step of terminating cotton marketing quotas for the 1943 crop and indicating that no quotas would be in effect for the 1944 crop.<sup>49</sup>

In order to fully measure the cost of these shortcomings, consideration would have to be given not only to the needed foodstuffs which were thus not brought into being, and to the hundreds of thousands of tons of fertilizers, millions of acres, and hundreds of millions of man-hours thereby devoted to production for surplus, but also to the additional burdens imposed on other sectors of the war effort by such diversion of scarce resources. For example, the release of manpower from cotton production might well have eased labor shortages elsewhere in agriculture, and might even have helped to decrease the costly drafting of skilled manpower from war plants. Similarly, the freeing of fertilizers by curtailing inessential cotton production might well have rendered it unnecessary—at least during the desperate early days of the war—to divert precious shipping from military runs to the South Pacific in order to bring up additional supplies of fertilizers from Chile.<sup>50</sup>

### *Tobacco*

Essentially, the case for reducing the wartime output of tobacco in the interest of releasing scarce productive resources for other crops was summarized in Mr. Wingate's terse reminder, cited above, that, "We cannot eat tobacco. . . . We have got to grow food." Opposition to such conversion was defended either on the grounds that the resources absorbed in growing tobacco were of insignificant proportions or, more commonly, by reference to the sharply rising demand for tobacco products. The first of these efforts at justification was demonstrably untenable, while the second was certainly inadequate, if not irrelevant.

In reviewing the resources which entered into tobacco production, it may be noted first that although less than one-half of one percent of the nation's harvested acreage was devoted to this crop, its increase of 500,000 acres between 1941 and 1945 represented 5 percent of the total gain in cropland acreage during this same period. Incidentally, land used to grow tobacco is generally well adapted to the production of other crops grown in the same areas, including peanuts, soybeans, potatoes, sweet potatoes and vegetables. Tobacco production also made comparatively heavy demands on supplies of agricultural manpower and fertilizers. From planting through harvesting, the tobacco crop required an average expenditure of some 400 man-hours per acre, more than any other major crop; hence, it absorbed between 5.5 and 7 percent of all the man-hours employed in domestic crop production, a

<sup>49</sup> References are to official Department of Agriculture news releases for the dates given.

<sup>50</sup> *House Hearings on Agriculture Department Appropriation Bill, 1944*, p. 202.



proportion exceeded only by corn, cotton and hay.<sup>51</sup> In order to help sustain the soil's capacity to produce such an exhausting crop, tobacco fields were dressed with an average of almost 800 lbs. of fertilizers per acre, surpassing the rate of application for other major crops, and accounting for about 5 percent of total fertilizer consumption.<sup>52</sup>

Whether the maintenance of such large expenditures of scarce resources was justified or not during the emergency depends on whether the conclusion is determined by normal marketing standards or by wartime mobilization standards. According to the peacetime maxim that supply should be adjusted to demand, the whole of the expansion in tobacco production was entirely justified in view of the fact that demand for tobacco products continued to exceed the supplies reaching the market. And yet there was little warrant for regarding the mounting levels of consumption as an accurate index of the volume of tobacco for which needs were utterly vital. Much of this gain was clearly associated with the deliberately reduced volume of competitive goods available to satisfy inflated purchasing power. On the other hand, the gap between supplies and requirements was even greater in the case of foodstuffs than in regard to tobacco, and the privations enforced by the former quite overshadowed those attributable to the latter in their bearing on personal health, on the vigor of the allied war effort, and on the progress of reconstruction in liberated areas.

The practical question which faced agricultural officials was not whether tobacco production should be eliminated completely, but whether—in view of the restrictions which had been imposed on the available supply of virtually every item of civilian consumption in order to maximize the output of the most urgently needed war products—it was sound to continue to accord preferential treatment to tobacco growers despite the substantial cost of such a policy in terms of diverted productive resources. Restated from the standpoint of mobilization criteria, the issue was whether expanding the production of tobacco represented the most effective employment of the land, labor, fertilizer and other resources required by such an undertaking.

Although domestic tobacco acreage declined sharply after the inception of hostilities in Europe, the cause was the chilling threat of bankruptcy rather than any readiness to accept the need for conversion to other crops. In 1939, tobacco growers had repudiated governmental restrictions on output and had produced the largest crop in national history, by harvesting more than 2 million acres with average yields breaking all records. Then, just as the leaf began to move toward the auctions, war forced the withdrawal of the British buyers who had hitherto accounted for approximately one-half of our sizeable annual exports.<sup>53</sup> Panic forced the markets to close, and only the

<sup>51</sup> *Agricultural Statistics—1945*, p. 419.

<sup>52</sup> U. S. Department of Agriculture, *Fertilizers and Lime in the U. S.*, Miscellaneous Publication No. 586, U. S. Government Printing Office, 1946, p. 86.

<sup>53</sup> *Agricultural Statistics—1942*, pp. 575-7.

assistance of the Federal government finally made possible the re-establishment of orderly marketing at reasonable prices, and thus safeguarded the solvency of a large proportion of the growers. In exercising its renewed control over tobacco production, the Department of Agriculture effected successive reductions in harvested acreage during the next two years. But this trend was reversed immediately after this country's entry into the war, despite the resultant intensification of mobilization requirements.

In view of the serious shortages of more urgently needed farm products, it may well be considered regrettable that the harvested acreage of tobacco was permitted to expand by one-third between 1942 and 1945, a larger proportionate gain than was achieved by any other major crop. The fact that the full measure of this increase had been actively encouraged by official goals, however, constituted so significant a departure from the patent dictates of mobilization as to encourage some doubt about the fulsomeness of this country's efforts to ameliorate the suffering from food shortages among the peoples of allied and liberated areas. Possibly, some temporary expansion in acreage might properly have been countenanced if yield per acre had declined so catastrophically as to jeopardize even the minimal levels of consumption which might be deemed to rank in urgency with food requirements. Instead, however, average yields were greater both in 1944 and 1945 than ever before. On the other hand, even a sharp reduction in tobacco stocks due to increased consumption would not have justified an increase in tobacco production; for mobilization objectives would have required the prevention of any such eventuality through the prompt imposition of curbs on increased use. Nevertheless, it may be noted as a further reflection on the course pursued that, although tobacco stocks declined during the war, the quantities on hand at the beginning of the 1945-46 season of the two principal types, flue-cured and burley, still exceeded average stocks during the several years preceding the war.

TABLE 14  
TOBACCO ACREAGE, PRODUCTION AND STOCKS, 1940-45

Year	Acreage Harvested (1,000 acres)	Annual Production (1,000,000 lbs.)	Stocks on Hand	
			Flue-cured, on July 1 (1,000,000 lbs.)	Burley, on Oct. 1 (1,000,000 lbs.)
1934-38 average ...	1,501	1,301	845	701
1940 .....	1,411	1,462	1,410	762
1941 .....	1,306	1,262	1,593	798
1942 .....	1,377	1,409	1,460	755
1943 .....	1,458	1,406	1,379	686
1944 .....	1,751	1,956	1,189	651
1945 .....	1,846	2,042	1,126	758

Source: Acreage and Production—*Table of Acreage Goals with Comparisons*, pp. 1 and 2; stocks—*The Tobacco Situation*, Bureau of Agricultural Economics, mimeographed, April 1946, pp. 7, 9.

In summarizing this discussion of the relationships between official acreage adjustment goals and resultant performance, the fundamental conclusion to be borne in mind is that neither the changes recommended, nor those effected, were of sufficient proportions to alter significantly the broad pattern of acreage allocation among crops which prevailed prior to the war. Only in the perspective of the comparative modesty of the tasks which it undertook is the seriousness of shortcomings in the achievements of the mobilization program fully apparent. Among these, it will be recalled, were noted that actual crop acreages fell short of goals persistently, and that the pattern of adjustments actually effected differed most substantially from recommendations. Such deficiencies in performance may be traced, at least in the first instance, to inadequacies in the functioning of the administrative apparatus of the mobilization program, as well as in the incentives and controls through which its aims were to be attained. On the other hand, the progressive reduction of goals and their increasing disregard of the principles of effective mobilization, which have also been noted, are necessarily traceable to the smaller group of officials responsible for the determination of basic agricultural mobilization policies and for the planning of annual goals. Moreover, the meager and declining proportions of these objectives undoubtedly contributed to the stunting of actual achievements by minimizing the scale of adjustments officially deemed to be urgent, and, even more heavily, by disguising the full extent of the gap between needs and results and thus helping to prevent the development of insistent public pressure for an intensification of mobilization incentives and controls.

#### 7. ACREAGE ADJUSTMENT POTENTIALS, GOALS AND RESULTS

Having already discussed requirements, potentials, goals and actual adjustments in turn, one need only review their comparative proportions to illustrate the progressive diminuendo which marked the successive stages of planning and performance linking needs with final results.

Beginning with requirements, it will be recalled that these were admittedly so huge as to have justified relatively extreme measures for ensuring the utmost expansion and conversion of agricultural production possible without burdening other major sectors of the war effort. The initial stage of planning for all-out mobilization involved the translation of these engulfing, but generalized, demands into a roughly quantitative schedule of the ultimate goals which might conceivably be attained after two years or more of unrelenting effort. How long a step downward from the level of needs was taken in this very first formulation of objectives is



TABLE 15—(Continued)  
 EXTENT OF WARTIME ACREAGE ADJUSTMENT POTENTIALS, GOALS AND RESULTS, BY MAJOR CROP GROUPS, 1942-45  
 Difference in thousands of acres between actual acreage in 1942 and potentials, goals, and results

Crop Groups	Potentials		Annual Goals				Actual Results			Ratio of Goals and Results to Estimates C and D			
	Estimate B <sup>1</sup>	Estimates C & D <sup>2</sup>	1943	1944	1945		1943	1944	1945	Goals		Results	
										1944 (%)	1945 (%)	1944 (%)	1945 (%)
Other Crops													
Wheat .....	+ 13,137	+ 12,100	+ 273	+ 14,803	+ 15,504		+ 2,900	+ 13,212	+ 16,554	+ 122	+ 128	+ 109	+ 137
Tobacco <sup>3</sup> .....	— 229	+ 71	+ 187	+ 373	+ 426		+ 74	+ 374	+ 469	+ 525	+ 600	+ 528	+ 660
Cotton, in cultivation July 1 .....	— 3,806	— 898	— 802	— 1,025	— 2,795		+ 1,360	— 2,948	— 5,553	+ 114	+ 311	+ 328	+ 619
Total for wheat, cotton and tobacco .....	+ 9,102	+ 11,273	— 372	+ 14,151	+ 13,135		+ 1,614	+ 10,638	+ 11,470	+ 125	+ 116	+ 94	+ 102
Summary Totals													
Total for all above crops except oats, barley, sugar beets, and cotton .....	.....	+ 43,515	....	+ 37,461	+ 29,991		+ 15,563	+ 22,410	+ 18,941	+ 86	+ 69	+ 51	+ 44
Total for oats, barley, sugar beets, rye and cotton .....	— 9,472 <sup>4</sup>	— 6,698	— 7,891	— 7,775	— 8,198		— 4,928	— 10,267	— 13,173	+ 116	+ 122	+ 153	+ 197
Total for all above crops .....	.....	+ 36,817	....	+ 29,686	+ 21,793		+ 10,635	+ 12,143	+ 5,768	+ 81	+ 59	+ 33	+ 16
Total for all above crops except rye, rice and sorghums .....	+ 38,464	+ 36,677	....	+ 30,182	+ 21,887		+ 10,212	+ 11,604	+ 7,773	+ 82	+ 60	+ 32	+ 21

<sup>1</sup> Estimate B did not include estimates for rye, rice or all sorghums except syrup.

<sup>2</sup> Because of close similarity of Estimates C and D (See Table 11), estimate D is used throughout except re: soybeans (for beans), peanuts (picked and threshed), and tame hay, where only Estimate C provided data on basis comparable with other data in this table.

<sup>3</sup> All data refer to planted acreage except re: tame hay, soybeans (for beans), peanuts (picked and threshed), truck crops for fresh markets, sugar cane, rye, and tobacco, where data refer to harvested acreage.

<sup>4</sup> Total for Estimate B excludes rye.

Source: Based on data in Table 10 and on *Table of Acreage Goals with Comparisons*.

evident from the fact that the estimates of maximum adjustment potentials which have been labeled B, C and D contemplated a net increase in the acreage of crops listed in Table 11 of only about 12 percent above their actual acreage in 1942; and they recommended total decreases, to allow for the conversion of available cropland to more essential or more efficient crops, of the astonishingly minute proportions of 3 percent or less.<sup>54</sup> Thus, the singular restraint reflected in agricultural planning for emergency adjustments throughout the mobilization period was dominant even at the outset, and even at the level of strategic planning.

The next level of planning, involving the definition of successive annual programs designed to effect progressive attainment of the envisioned pattern of maximum output, was characterized by a further contraction of the projected expansion. At their wartime peak in 1944, the net increase sought by total acreage goals for crops listed in Table 11 was still about 20 percent less than the foregoing modest estimates of maximum potentials. Moreover, even this degree of progress was short-lived, for this margin of deficiency was doubled in 1945—despite the original expectation that the agricultural mobilization effort would reach its zenith in that year.

Continuing on to the final stage of program effectuation, actual performance contributed substantially to the further widening of the gap between needs and accomplished acreage gains. As was the case with goals, Table 15 reveals that the net increase above 1942 levels in the acreage of crops listed in Table 11 reached a peak in 1944, and then declined. But the gains in actual acreage fell far short even of the inadequate gains registered by goals. In 1944, while goals sought an increase in acreage approximating 80 percent of estimated potentials, the actual net increase achieved was only one-third as great as potentials; and in 1945, while the net increase in acreage sought by goals declined to about 60 percent of potentials, the actual results shrank to a mere 20 percent of potentials or less. Despite the difficulties, burdens and inconveniences in the way of all-out mobilization, such extraordinarily meager results cannot but reflect most unfavorably on the effectiveness of this sector of the mobilization effort.

Further examination of Table 15 discloses a sharp difference in the relative proportions of potentials, goals and results between the total for

<sup>54</sup> Excluding rye, rice and all sorghums except for syrup, estimate B envisioned a net increase over the actual acreage in 1942 of the crops listed in Table 11 of 12 percent; and estimates C and D of about 15 percent. For all crops in Table 11, estimates C and D proposed a net increase of 10.8 percent above the actual acreage in 1942.

those crop groups for which estimates B, C and D envisioned gains in acreage and the total for those for which decreases were projected.<sup>55</sup> For the former, as in the case of the total for all crops, goals fell short of potentials and results fell short of goals. But in regard to oats and barley, sugar beets and rye, and cotton—for which reductions were recommended—not only did peak goals exceed estimated potentials, but goals were in turn surpassed by the acreage reductions which actually materialized. Such differential responses certainly cast some doubt on the not infrequently encountered view among agricultural officials that the greatest obstacle to effecting proposed adjustments was a pervasive, blind inertia.

Finally, a comparison of goals and results with estimated potentials C and D also reveals significant divergences between the feed crops category and that encompassing food and vegetable oil crops. In the case of crops for which potentials envisioned expansion, the ratio of goals and results to potentials was substantially higher for feed crops than for food and oil crops. In 1944 and 1945 the goals for such feed crops equalled 91 percent and 86 percent, respectively, of estimates C and D; while in those same years the goals for all food and vegetable oil crops (except sugar beets and rye) came to only 53 percent and 9 percent of the comparable estimate of potentials. Again, in 1944 and 1945 the actual increases in acreage registered by corn, tame hay and all sorghums (except for syrup) represented 66 percent and 13 percent, respectively, of estimated potentials; while the comparable ratios for food and vegetable oil crops recommended for expansion were - 5 percent and zero percent. On the other hand, in the case of crops for which maximum potential programs suggested reductions, the ratio of goals and results to potentials was twice as high for sugar beets and rye as for oats and barley.

The foregoing analysis of land use adjustments has been the first of several parallel undertakings in this study designed to reveal the major sources of shortcomings in agricultural mobilization by exploring the effectiveness with which the various resources available for farm production were utilized to maximize the output of needed products. Particular importance attaches to these initial findings, however, not only because the use made of land resources is the primary determinant of the volume

<sup>55</sup> The only crop in Table 11 with respect to which the direction of adjustment proposed in estimate B differed from that proposed by C and D was tobacco. Inasmuch as C and D supported an expansion in such acreage, and in view of the fact that annual goals, too, encouraged increases from the very outset, tobacco has been included for purposes of the above computation with the other crops for which B as well as C and D envisioned increases.

and composition of agricultural production, but also because of the comparatively sharp focus in which they reflect the scope, vigor and efficacy of the leadership exercised by mobilization officials.

In reviewing the actual adjustments which were effected, it was found that gains had been made in expanding the total acreage devoted to crops, in raising yields per acre, and in the reallocation of land among crops so as to ensure maximum conversion to those crops which were most efficient in producing needed nutrients from available resources. But these gains were seriously deficient in comparison either with the towering proportions of need, or with the potentials which might have been realized if mobilization efforts had been pressed with greater determination. Nor was the cost of these inadequacies limited to diminishing the contribution of land-use adjustments to peak production. In addition, shortcomings in conversion also ensured that the losses occasioned by continuing to divert land to less efficient or less essential crops would be compounded by the resultant necessity for similarly diverting labor, machinery, fertilizers and other factors of production as well to bring such plantings to fruition.

Further analysis suggested that much of the responsibility for these shortcomings in achievement might be traceable to weaknesses in the leadership of the mobilization program. Although the uncommonly comprehensive materials which were prepared relating to acreage adjustment potentials, goals and results gave evidence that officials had been commendably aware of the need for careful planning in effectuating mobilization, the results of such planning were distinctly less praiseworthy. By not formulating and publicizing periodic, detailed estimates of the full measure of anticipated requirements—based on allowances for meeting needs expected to materialize during the remaining war years and early post-liberation period as well as for current annual account—mobilization officials failed to establish a reliable basis for gauging the adequacy of suggested and realized adjustments. By not issuing a definition of the basic principles whereby agriculture's contribution to the national and allied war efforts could be maximized, responsible officials failed to provide forthright standards for appraising the extent to which successive annual goal schedules were in accord with the dictates of optimum progress, and thus for helping to highlight and to discourage significant deviations or lags. By subscribing to evidently restrained estimates of potentials as representing true maxima, these same officials revealed an early conviction that wartime adjustments needed to be only of an essentially peripheral nature—thus preserving the fundamental pre-war patterns of cropland allocation—and thereby contracted the scale on which forth-



coming annual goals would be proportioned. In propagating annual goals which were unduly diffident in reach, such officials aggravated the failure to stimulate maximum effort, originally rooted in the absence of authoritative estimates of total requirements, by encouraging unwarranted optimism about the adequacy of mobilization policies and achievements, and thus helping to suppress demands for an intensification of mobilization efforts. As a final instance of shortcomings in planning, it should be noted that because of an increasing propensity to adjust goals to conform to production probabilities, mobilization officials must also be held responsible for the progressive disappearance from annual goals of a coherent strategy for maximizing the output of the most essential and most efficient crops. Such disregard of strategic principles also served to eliminate any sound, unified basis for guiding the mobilization of each of the various other factors of production. Moreover, the expediency which thus pervaded the unfolding of mobilization policies further undermined the efficacy of official leadership by tacitly encouraging the disparagement or active subversion of unpopular proposals for adjustment.

Additional weaknesses in the leadership of the mobilization program were noted after turning from planning to the execution of plans. The fact that the scale of accomplishments fell consistently and substantially short of goals, despite their quite modest proportions, and despite their careful regard for "feasibility," testified to the general feebleness of the forward drive generated by mobilization authorities. The still greater disparities found between the annual crop by crop patterning of actual adjustments and of goal proposals demonstrated that mobilization leaders were even less effective in guiding the re-allocation of available cropland resources than in expanding their total proportions.

Important as these findings seem in their bearing on the course of land use adjustments, it should be noted also that in view of the fundamental nature of the shortcomings in leadership just reviewed—involving the very scale, strategy and vigor of mobilization efforts—such influences may be expected to have exerted a major retarding effect on progress in other sectors of agricultural mobilization as well.

## CHAPTER V

### UTILIZATION OF LIVESTOCK RESOURCES

No undertaking within the compass of agricultural mobilization posed issues which were more critical to its over-all success or which were debated more widely or aroused greater acrimony than those encountered in the management of livestock and feed resources. And in no other case did fundamental misconceptions about the very nature of the wartime task become so prevalent, not only among the public at large but among farmers as well, and even among the members of Congress. Before beginning the exploration of livestock mobilization problems and achievements, however, it should be noted that, because of the close inter-relationships between livestock production and crop production forged by the dual role of feedstuffs, a number of the problems to be discussed in the early parts of this chapter will be related to those already touched on—usually in a somewhat different focus—in the preceding chapter.

#### I. LIVESTOCK MOBILIZATION OBJECTIVES

The public complained of the inadequacy of efforts to increase the supply of steaks, pork chops, butter and other favored livestock products, whereas, in reality, the production of these was unjustifiably swollen from the standpoint of mobilization criteria. Livestock producers complained about shortages of feedstuffs, whereas the supply of these, too, had grown excessive relative to the need for other products requiring similar production resources. Farmers, stockmen, feeders, slaughterers and distributors complained of inadequate prices, whereas such prices had already risen too high to prevent the excessive expansion of their enterprises. Numerous members of Congress joined livestock and feed producing and distributing groups in denouncing overwhelming governmental interference in these industries, whereas actually the controls symbolized by such claims of meddling were, by any reasonable standards of mobilization, so inadequate during most of the war as to border on the dangerous. Indeed, such was the pressure of these generally accepted misconceptions that, in time, even Federal officials came to boast of the heavy expansion in livestock and feed production, as though unaware that these inordinate gains constituted evidence of their costly failures to keep the mobilization program in balance.

In view of the pervasiveness of such misconceptions, as a result of which most of the remedial measures proposed actually sought to aggra-

vate existing imbalances instead of redressing them, it is apparent that the first requirement in the development of a sound program for the wartime management of livestock resources was the definition of appropriate guiding objectives.

Efforts to formulate livestock mobilization objectives were heavily conditioned by the consideration given to the surrounding matrix of agricultural and non-agricultural production relationships, which had been patterned by the peacetime pursuit of maximum profits. Exhibiting the excessive preoccupation with familiar activities which was common in all sectors of the national economy when confronted with the unprecedented challenge of total mobilization, the owners of livestock resources sought to evolve a mobilization program for such production facilities within the cramped framework of livestock considerations alone. As a result of so insular a viewpoint, they not only succumbed to the oversimplification that mobilizing was practically synonymous with maximizing output, thereby leading them to the conclusion that livestock production should be expanded to the utmost profitable level, but they also failed to adduce any basis other than market demand for allocating feed supplies among alternative livestock enterprises so as to maximize this sector's contribution to national mobilization.

On the other hand, a sharply contrasting definition of livestock mobilization objectives emerged from the broader view that livestock production constituted but one of the integral and closely interacting parts of the national productive effort—all of them competing against one another for scarce resources and having to justify their respective claims by the value of their additions to the total output of needed products. According to this approach, the over-riding objective of the entire mobilization program, and of each of its components and sub-components, was to maximize the total national contribution to the Allied war effort. In theory, this would have required redirecting the application of available resources along whatever lines would yield a pattern of output congruent with the estimated schedule of current and anticipated future requirements. It will be recalled, however, that such a goal was rendered impracticable by the circumstance that total wartime requirements for military equipment, industrial machinery, agricultural products and other goods and services far surpassed the production capacity of available resources. Accordingly, as was noted in the preceding chapter, in order to reduce the cost in human suffering and in military supply deficiencies of unfulfilled requirements, it was necessary as a general principle of mobilization: to scale down total requirements, by sharply curtailing or eliminating the categories deemed

least essential; and then to maximize the value of total production, by concentrating on those products and production practices which made the most effective use of available resources in meeting requirements.

Applying this more realistic approach to the major issues involved in the wartime management of livestock resources required a shift in the primary objective of livestock mobilization from seeking to maximize the total volume of livestock production in favor of seeking to limit livestock production to whatever levels could be attained by employing only such resources as would not yield a substantially greater return of needed products by application to non-livestock enterprises. As a second objective, this approach dictated that the resources allocated to livestock production be so divided among alternative types of enterprises as to maximize their aggregate contribution of needed products. And, finally, in regard to each livestock enterprise—whether devoted to the production of beef and veal, or pork and lard, or poultry and eggs, or dairy products—this approach called for the promptest possible effectuation of whatever intake ratios per animal unit offered the largest output of needed products per unit of feed consumed.

Although these guiding objectives may still appear to be somewhat vague, all that was necessary in order to derive from them the more specific objectives of a sound livestock mobilization program—including the direction and scale of changes to be sought in the volume of livestock production as a whole, as well as in the output of each major livestock product—was to consult the facts relating to the comparative efficiency of various livestock and non-livestock products in converting scarce production resources into end-products satisfying similar essential requirements.

## 2. THE RELATIVE EFFICIENCY OF LIVESTOCK ENTERPRISES

A workable program of large scale economic adjustments cannot, of course, be based on theoretical considerations alone, but its soundness and its adherence to professed goals are dependent on the extent to which objective determinations outweigh concessions to expediency in the design of its fundamental policies. Hence, although appropriate attention had to be given to the preferences of producers and consumers bearing on changes in the composition of agricultural output as well as to the physical difficulties and costs of hurriedly redirecting the application of productive resources, it was nevertheless important that the central thrusts of a livestock mobilization program be determined by the facts indicating the relative efficiency of livestock enterprises.

*Livestock Versus Non-Livestock Enterprises*

The first task of such a program was to consider the problem of dividing the resources available for agricultural production between livestock and non-livestock undertakings. In accordance with the basic objectives of livestock mobilization which have been noted, such decisions had to take account of: the relative scale of requirements for livestock and non-livestock products; the extent to which products in either of these categories could be substituted for those in the other category on the basis of reasonable nutritional equivalence; and the comparative efficiency of these two types of production in converting resources into needed end-products. The fact that total requirements far exceeded the production capacity of agriculture dictated that substitutions in favor of those products which yielded the highest returns per unit of resources would be necessary in order to minimize shortcomings. The fact that both livestock products and non-livestock products were capable of supplying proteins, fats and needed minerals and vitamins demonstrated that such substitutions were feasible on a substantial scale, from the standpoint of meeting nutritional requirements. Taken together, these facts established that a change in the pre-war relative proportions of livestock and non-livestock production was not only feasible but necessary.

The direction of the shift in resources to be sought as between these two categories of agricultural production was readily evident from the finding noted in the preceding chapter that the two-step cycle of producing livestock products through the prior production and consumption of animal feeds was invariably less productive of nutrients per unit of farm resources used than the growing of crops for direct human consumption. Similarly, the extent of the shift warranted by these considerations was apparent from the fact suggested by Table 9, and confirmed by a fuller examination of such data,<sup>1</sup> that this difference in the efficiency of producing nutrients was a very substantial one. Livestock enterprises showed to greatest comparative advantage in respect to the calcium yielded by dairy products and in respect to the fat produced by hogs, but even these records were surpassed by soybeans and certain other crops. In the case of riboflavin, niacin and calories, selected food crops produced two to six times as much per unit of farm resources as the highest yielding livestock enterprises. Finally, in producing proteins, carbohydrates, iron, phosphorus, vitamin A, ascorbic acid and thiamine, the more productive food

<sup>1</sup> See *Using Resources to Meet Food Needs*, on which Table 9 is based, especially pp. 34, 45, 57, 58.

crops provided between four and fifty times as much of these nutrients per unit of farm resources as the highest yielding livestock enterprises. Hence, in view of the consistency, and especially of the magnitude, of these differentials, it was obvious that the shift of agricultural resources from livestock to non-livestock products could assume sizeable proportions without exhausting opportunities for thereby augmenting the total yield of needed nutrients.

Because livestock production potentials were determined primarily by the availability of feed supplies, the shifting of resources from livestock to non-livestock enterprises centered around the reallocation of acreage between feedstuffs and other crops. In planning this transfer, there was no reason even in theory for seeking the complete elimination of livestock production; for most grazing lands and farm pastures were patently better adapted to the support of livestock than to the production of intensive crops. Moreover, inasmuch as agricultural mobilization required expansion of the land area in productive use, as well as increasing the intensity of production on each acre to whatever level could be sustained during the war without damaging soil properties irreparably, such planning had also to provide for certain adjustments favoring livestock enterprises, among them:

1. Bringing additional idle lands into productive use, including those which offered an increment only in grazing facilities;
2. Shifting from food crops to feed crops in areas where the latter are produced very much more efficiently, and where the former represent merely the carry-over of traditional diversification practices;
3. Introducing on acreage justifiably devoted to feed crops and forage the highest yielding plant varieties which could be grown profitably;
4. Raising the efficiency with which feedstuffs are produced by increasing the applications of fertilizers and other resources whenever the resultant gains surpassed the benefits anticipated from alternative applications of such resources.

On the other hand, it should be noted that in requiring the transfer of acreage from livestock enterprises to the production of food crops, whenever the latter offered a materially greater output of needed nutrients, mobilization principles contemplated such adjustments not only in the case of acreage commonly devoted to feed grains and hay, but in the case of pastures and even less intensively employed lands as well, except where these represented necessary intermediate stages in crop rotation cycles. In general, the effect of these considerations would have been to counsel a heavy reduction in the acreage of feed grains, a lesser reduction in the

acreage of tame hay, and still lesser reductions in other acreage devoted to feedstuffs and forage—all in favor of food crops—along with some possible gain in grazing area, the shifting of a sizeable amount of wheat acreage from small plots in the East and Mid-West to the larger scale operations in the Great Plains and South Central regions, and a substantial increase in the per acre yield of feedstuffs.

After outlining the basic pattern of acreage adjustments prescribed by considerations of direct productive efficiency alone, the further development of a sound program required the appraisal of other considerations entering into the definition of practicable objectives. Among the more important of these were: the comparative efficiency of agricultural products in the use of transportation and other distribution facilities; the costs in time and resources of effecting projected shifts in relation to anticipated increments in output; and the financial, administrative and political burdens involved in gaining the co-operation of producers, distributors and consumers and in then guiding their contributions. Each of these considerations tended to offset somewhat the lesser productive efficiency of livestock enterprises; the first did so because of the superior concentration of certain nutrients per unit of shipping bulk in a number of livestock products, and the remaining two because heavy initial costs and inconveniences always tend to discourage abrupt and far-reaching changes, even in the face of generous expectations.

Other considerations augmented those just mentioned in whittling down the extent of the reduction in livestock production suggested by its decidedly lower productive efficiency. One of these was the generally recognized need to ensure at least enough meat production to fulfill certain minimum nutritional requirements for which crop nutrients were not a complete substitute. Another was to supply such additional quantities as were deemed necessary to maintain effective morale, especially among those engaged in heavy muscular work and long addicted to the view that their efforts could only be sustained by means of heavy meat consumption. Yet another such factor, although of progressively declining significance, was the swollen state of this country's wheat stocks and livestock herds at the time of its entrance into the war. As a result of these unwonted accretions, extra allowances had to be made for livestock feeding in order to prevent the wastes attendant on forcing herds to be liquidated too rapidly. It was also argued by some that, at least during the early period of our participation in the war, a modest portion of available wheat stocks could be fed to livestock—in the interests of increasing immediate food production and relieving the immediate pressure on storage facilities—and

still be replaced out of new production prior to the expected emergence of heavy requirements from liberated areas.

Allusions were made to each of the foregoing considerations in attempts to justify resistance to the reduction of livestock production, despite the patent mandate of mobilization requirements. Objectively considered, however, all of these factors taken together justified only modest modifications in the patterning of livestock and feed goals suggested by measures of comparative efficiency, and these mostly in the direction of moderating the early pace of the contemplated change-over rather than of shrinking its proportions.

The cost of making changes ruled out only those adjustments in agricultural production which were the least promising, and hence of least significance in any event. To be sure, distaste for the proposed change was widespread among the producers, distributors and consumers of livestock products. Yet, constructive adaptation to such antipathies required not the abandonment of needed changes, but rather the provision of appropriate safeguards and rewards to offset the heavier risks and burdens which were anticipated. Turning to the need for certain animal protein components in healthy diets, on which most nutritional authorities seemed to be agreed, these requirements were of lesser proportions than the supply ensured by the output of livestock products merely from the resources already committed to such employment by the fact that it represented their most productive use. As for morale effects, although a substantial reduction in livestock production was certain to provoke some discomfort and resentment, such reactions were generally far from reaching an intensity which might have significantly threatened production, loyalty or even willingness to co-operate in necessary community activities supporting the war effort. On the other hand, comparatively little meat was involved in allotting supplementary allowances to those few groups, such as lumber workers, seamen and certain categories of the physically ill, for whom the general reductions might have entailed serious deprivation.

In short, even after due recognition of the significance for food distribution of the lesser bulk of many livestock products in relation to their content of certain nutrients, it seems apparent that the foregoing considerations did not justify any radical alteration of the basic pattern of readjustments in agricultural output suggested by considerations of productive efficiency. This broad conclusion emerged also during the discussion of basic acreage adjustment policies in the preceding chapter. Nevertheless, its reaffirmation after additional appraisal is worthy of emphasis in view of the fact that no issue confronting the management of agri-



cultural mobilization was more fundamental than the division of available resources between livestock and non-livestock enterprises.<sup>2</sup>

### *Comparative Efficiency of Livestock Adjustment Alternatives*

The second major problem to which a livestock mobilization program had to address itself involved the allocation of resources available for such production among alternative enterprises.

Livestock enterprises differed substantially in the comparative efficiency of their production of the basic nutrients. A comparison of dairy, chicken, hog, beef cattle and sheep enterprises reveals that the relative yield of the most productive of these was more than five times as great as the least productive in respect to six of the nutrients covered in Table 16, and that this range shrank to less than three times only in respect to proteins and iron. Reviewing the sectors of greatest efficiency of each enterprise, it will be noted that beef cattle led all others in the relative yield of iron and niacin, that hogs led in the relative yield of calories, fat and thiamine, and that dairy enterprise proved most productive in the case of all other nutrients. Chicken and egg enterprise showed to greatest advantage in its yield of calcium, vitamin A and riboflavin, ranking second after dairy enterprise in regard to each. The nutritional output of all sheep production, which bore a closer resemblance to that of beef cattle than was to be found between any two other major livestock enterprises, ranked second in its relative yield of phosphorus and thiamine as well as iron.

In order to maximize the contribution of livestock production to the fulfillment of food requirements, proposed adjustments had to be directed toward two objectives: first, to maximize the output of those nutrients which were needed in greater quantities than could be supplied by crops grown for direct human consumption; and then, second, as in the case of non-livestock production, to allocate remaining resources to the enterprises which were most efficient in converting them into nutrients. As noted in the preceding chapter, the nutrients in comparatively shortest supply domestically relative to health requirements were calcium and riboflavin, both of which are produced more efficiently by milk cows than by other livestock enterprises. As for the general productive efficiency of livestock alternatives, Table 16 testifies to the extraordinary superiority of dairy enterprise in this respect as well, ranking it as the most efficient

<sup>2</sup> The necessity for some shift away from livestock production was recognized by the feed industry itself. The *Washington Post* reported on April 24, 1943 that, "J. A. McConnell, chairman of the Feed Industry Council, yesterday asserted the only way the war food program can be met 'is to use more of our grain for direct human consumption.'"

TABLE 16  
PRODUCTIVE EFFICIENCY OF ALTERNATIVE LIVESTOCK ENTERPRISES  
Average output of food nutrients by selected livestock products per unit of all farm resources employed in their production <sup>1</sup>

Livestock Enterprises	Energy value (1,000 calories)	Protein (lbs.)	Fat (lbs.)	Carbo-hydrates (lbs.)	MINERALS				VITAMINS			
					Calcium (gms.)	Phos-phorus (gms.)	Iron (mgs.)	Vita-min A (1,000 int'l units)	Thiamin (mgs.)	Ascorbic Acid (gms.)	Ribo-flavin (mgs.)	Niacin (mgs.)
Dairy enterprise <sup>2</sup>	124	12	19	12	146	120	386	353	41	1	210	523
Milk, whole	139	16	17	22	238	188	406	392	59	4	363	201
Butter	145	4	35	4	4	4	35	651	1	0	2	0
Cheese, American	140	19	25	1	311	217	357	606	14	0	143	71
Chicken enterprise <sup>3</sup>	39	8	6	4	10	50	588	177	42	4	91	398
Eggs	43	8	7	4	15	58	744	276	56	0	138	17
Chickens	31	7	4	0	3	35	307	0	15	1	8	1,080
Pork and lard	196	7	45	0	2	39	554	0	376	0	51	1,953
Pork	122	7	27	0	2	39	554	0	376	0	51	1,953
Lard	74	0	18	0	0	0	0	0	0	0	0	0
All beef cattle	77	11	13	0	3	54	750	0	45	0	63	2,382
Fattening steers	50	7	9	0	2	35	492	0	30	0	42	1,562
All sheep	77	9	15	0	3	54	740	0	123	0	84	1,244
Fattening lambs	63	8	13	0	3	48	654	0	109	0	74	1,100

<sup>1</sup> A unit represents the quantity of farm resources required to produce \$10 worth of each product or combination of products in the 1935-39 period.

<sup>2</sup> Includes cull cows, veal calves, and milk used in the way all milk was used in 1942.

<sup>3</sup> Includes chickens and eggs in the same combination as their total production in 1942.

<sup>4</sup> Less than one.

Source: R. P. Christensen, *Using Resources to Meet Food Needs*, Bureau of Agricultural Economics, mimeographed, May 1943, p. 34.

producer of proteins, carbohydrates, phosphorus and vitamin A, as well as of calcium and riboflavin, and also ranking it as the second most efficient producer of calories and fat. Thus, the proposed adjustment which found firmest support in these considerations was the vigorous expansion of dairy enterprise. In addition, such criteria also provided some warrant for expanding chicken enterprises, partly on the grounds that eggs are more efficient than other livestock products in supplementing the production of calcium and riboflavin contributed by dairy enterprise, and partly on the grounds that "poultry are able to make good use of labor and other resources that are not fully utilized on many farms."<sup>3</sup>

The decreasing nutritional returns available from fattening hogs, steers and lambs, shown in Table 16, counseled a sharp decrease in the allocation of feed concentrates to such enterprises. This, in turn, would have required a substantial decrease in hog numbers, as well as a reduction in their average weight at slaughter to 200 lbs. or less,<sup>4</sup> and the limitation of beef cattle and sheep numbers to such levels as could be sustained by the roughage feeds and grazing and pasture lands left after dairy production requirements had been fully met.

Further significant increments in the contribution of livestock production to the total supply of needed nutrients were attainable through two additional adjustments in the management of resources available for dairy enterprise: by raising average feed consumption per cow and by curtailing the production of butter in favor of dairy products which ensured a fuller utilization of the nutrients present in whole milk. Heavier feeding offered a means of increasing milk production per cow on a majority of farms,<sup>5</sup> with profit to farmers, thereby making possible a more rapid ex-

<sup>3</sup> *Maximum Wartime Production Capacity of American Agriculture*, March 31, 1943, p. 9.

<sup>4</sup> "If possible, it would appear desirable to reduce the weight of hogs even more, since most efficient production of protein is obtained at weights below 200 pounds." (*Ibid.*)

<sup>5</sup> In this connection, the Bureau of Agricultural Economics reported as follows in 1942, "A study of input-output relationships in dairy production was completed. 'How heavily does it pay to feed?' was the question being asked by farmers. In general, the answer was, 'Much more heavily than most farmers have been feeding.'" (*Report of the Chief of the Bureau of Agricultural Economics, 1942*, U. S. Government Printing Office, 1942, p. 5.) That such opportunities were far from exhausted even years later is apparent from the following appraisal by another of the Bureau's leading officials, "Because such a large proportion of the feed used by a dairy cow is required for maintenance, underfeeding means that most of the feed is used for body maintenance, and a relatively small part of it for milk production. . . . On the majority of farms to increase the feed supply per [dairy cow] . . . would increase both output per head and net income to farmers." (Sherman E. Johnson, *Change in Farming in War and Peace*, U. S. Department of Agriculture, mimeographed, June 1946, p. 39.)

pansion of total output than could be effected by the lengthier process of building up dairy herds. The marked nutritional advantage of diverting milk from butter production in favor of using it as fluid whole milk or in such forms as evaporated milk, condensed milk, or dried whole milk, derives from the fact that the bulk of the nutrient-rich residue left after separation of the butterfat has generally been fed to livestock, used for industrial purposes, or wasted entirely.

Even if it were conceded that the surplus carry-over of feed concentrates during the early period of the war would have been used most beneficially by making it available for livestock production, it would not have been necessary to introduce any serious alterations in the pattern of adjustments just outlined. Provident management would have suggested that perhaps the first allocation from such supplies in the interests of livestock production should have been to establish some special reserves against the threat of a drought or other natural catastrophe. As it happened, extraordinary good fortune spared this country such grave emergencies, although most other major agricultural producing areas were hard hit sometime during the war and immediate post-war years. There is little reason, however, even at this late date, for condoning the failure to provide reasonable safeguards against such disastrous risks. The remainder of these concentrates might well have been allocated in accordance with the basic adjustments which have been proposed, with the most generous allowance being granted to encourage the most rapid possible increase in dairy production, with another portion devoted to the expansion of chicken and egg production, and with the remainder used to cushion the rate of withdrawal of concentrates from the feeding of hogs, beef cattle and sheep. In particular, consideration of productive efficiency offered no warrant whatever for using these concentrates to encourage or even to permit the further expansion of hog, beef and sheep production.

Before concluding this discussion, it should be emphasized once more that although the adjustments discussed above would have reduced livestock production substantially, they would have stopped very far short of sentencing Americans to the "cornflakes diet" that some professed to fear.<sup>6</sup> The 1942 level of production, from which reductions were suggested, was the highest in the nation's history. And reduction of the supply of concentrates fed to hogs, beef cattle and sheep would not have forced a proportionate decrease in the production of these animals. Hogs,

<sup>6</sup> The report of a speech by Mr. Alfred M. Landon, former Republican nominee for the Presidency, was headlined as follows in the *Washington Daily News* for August 31, 1943: "Landon Says Americans Face Cornflakes Diet."

which derived about 95 percent of their feed values from grains and other concentrates, would certainly have been hard hit, but beef cattle and sheep, which were almost as overwhelmingly dependent on hay, other roughage and pasture for sustenance, were obviously less vulnerable to the proposed diversion of concentrates.<sup>7</sup> Moreover, the reduction of herds by increased marketing and slaughter tended to increase rather than to decrease current meat supplies, and hence would have augmented the reasonable supply already ensured by continuing production.

### 3. LIVESTOCK ADJUSTMENT POTENTIALS

Having reviewed the general principles which seem to have been applicable to the wartime management of livestock resources, as well as the basic pattern of adjustments suggested by such considerations, it is of interest to explore the views which seemed to predominate in the actual planning of agricultural mobilization. The discussion turns, accordingly, to the broadest picture available of the strategic perspectives which guided the formulation of goals: the several proposals for maximizing agriculture's wartime production capacity which were prepared by official agencies, and whose crop production aspects have already been examined.

Our analysis has shown that the potential magnitude of increments in the output of needed nutrients was determined primarily by the extent to which resources were to be shifted from livestock to non-livestock enterprises, and, more particularly, by the extent to which acreage was to be shifted from feed grains to crops grown for direct human consumption. Hence, it is of major significance that each of the official programs which professed to outline maximum potentials not only failed to recommend a substantial reduction in the cropland devoted to feed grains, or even that it be confined to existing levels, but actually proposed that such acreage be expanded.

Here was a clear demonstration of fundamental shortcomings in the conceptualization of mobilization requirements by leading officials. Because it concerns the interaction of cropland adjustments and livestock adjustments, this finding was also emphasized in the preceding chapter.

<sup>7</sup> A careful survey of feed consumption estimated that during the three years ending June 30, 1940, concentrates accounted for the following proportions of the total feed values consumed by various categories of livestock: all poultry 95.6%, all hogs 94.8%, milk cows 24.0%, all beef cattle 21.3%, beef cows 8.0%, and all sheep and goats 4.4%. (R. D. Jennings, *Feed Consumption by Livestock, 1910-41*, U. S. Department of Agriculture Circular No. 670, U. S. Government Printing Office, 1943, Table 15, p. 21.) Of course, the figure for all beef cattle would be lowered to a level closer to that given for beef cows under the adjustments proposed above.

However, the full measure of this disregard of mobilization requirements is revealed only when "maximum" proposals are evaluated in terms of feed grain supplies, instead of acreage alone. For example, the feed value of an acre of corn is more than half again as large as that of an acre of barley and nearly double that of an acre of oats.<sup>8</sup> As a result, by calling for an increase in corn acreage more than sufficient to offset projected reduction in oats and barley acreage, these proposals were really seeking a relative increase in the feed value of these three grains almost three times that indicated by the resultant net gain in acreage. These proposals also tended to further augment the annual output of feed concentrates by recommending a heavy expansion in the production of wheat, commonly classified as a food grain but of which a substantial proportion was expected to be made available for feeding livestock.

Nevertheless, these "maximum" proposals did not limit livestock production even to the levels which could be supported by the expanded production of feed which they were recommending. As a first major supplement to the annual output of concentrates, they proposed that the stocks of feedable grains which had been accumulated prior to and during the early years of the war, largely through the operation of the Ever-Normal Granary program, be released to livestock at such a rate as would reduce the carryover to minimum essential levels, by October 1944 according to one proposal,<sup>9</sup> or by October 1946 according to another.<sup>10</sup> Inasmuch as such stocks were estimated as late as October 1, 1943, "to amount to nearly one-third of the annual feed production,"<sup>11</sup> it will be seen that even the more cautious of these would have represented a handsome addition to the total supply. And yet, not even all of the foregoing sufficed to prevent these "maximum" programs from actually recommending the importation of wheat, oats and barley on an unprecedented scale.<sup>12</sup>

8 Relative feed values per bushel when fed to mixed livestock under average conditions in the U. S. as a whole, are: wheat 1.125, corn 1.00, barley .806, oats .503 and grain sorghums .95. (Division of Statistical and Historical Research, *Specified Statistics Relating to the Livestock and Feed Situation*, Bureau of Agricultural Economics, May 26, 1943.) For more complete data by types of feedstuffs, by types of livestock fed, and by types of feeding problems, see R. D. Jennings, *op. cit.*, pp. 11-13.

9 *Maximum Wartime Production Capacity of American Agriculture*, June 1, 1943, p. 36.

10 *Maximum Wartime Production Capacity of American Agriculture*, March 31, 1943, p. 24.

11 *Ibid.*

12 For example, the June report cited in the above footnote suggested the importation of 255 million bushels (6.4 million tons) of these three grains from Canada and Australia during the feeding years (beginning October 1) 1943-44 and 1944-45 (*op. cit.*, p. 37).

In all fairness, it must be borne in mind that these proposals were prepared in 1943 instead of two years earlier and hence had to concentrate on what could be done to maximize mobilization achievements in spite of the extraordinary gain in livestock numbers which had taken place during this interval, and which certainly narrowed the range of practicable alternatives. But this very delay also demonstrated how heavy a drain on agricultural resources was imposed by expanded livestock production and, because of the shorter period left for furthering mobilization, rendered the prompt introduction of effective correctives even more imperative. To have proposed the scale of potentials in 1943 which might have been projected in 1940 or 1941 would have been unrealistic and therefore, from the standpoint of guiding the formulation of action programs, dangerous. But even a reasonably determined effort to redress the costly imbalances which had developed might at least have called for a substantial reduction in feed grain production—even though its immediate effect on total feed supplies would have been partially cushioned by the orderly release of accumulated reserves, by shifts in the distribution of the remaining acreage among feed grains so as to raise the resultant feed value per acre, and by increases in the production of roughage feeds. In addition, such a program should have recommended a substantial reduction in proposed allocations to livestock out of wheat produced in 1943 and thereafter, and should also have rejected proposals to import feeds on any large scale.

Discussion of the readjustments in the relative scale of alternative livestock enterprises put forward by the "maximum" proposals must be conditioned by the realization that this was the lesser of the two major issues confronting livestock mobilization, and that even the fullest conformance with the dictates of effective mobilization in this area would in no wise have reduced the serious shortcomings imposed by their recommendations in regard to the scale of feed supplies.

As in the case of estimated acreage adjustment potentials, the most striking feature of proposals for altering the pattern of livestock production was their extraordinary restraint. It is hard to associate these proposals for livestock adjustments, which rarely exceeded even 10 percent, with their proclaimed objective of defining the maximum potentials attainable after two years or more of unrelenting effort under the pressure of war emergencies. Table 17 reveals that adjustments of more than 10 percent in livestock numbers were proposed only in regard to the number of hens and pullets on farms, with Estimate B's suggestion of a 9 percent reduction in the number of pigs saved annually ranking next in size. In respect to the output of livestock products, adjustments in excess of 10 percent were suggested for eggs by Estimates B and D, and by the latter alone for lamb and mutton.

TABLE 17  
LIVESTOCK ADJUSTMENT POTENTIALS, GOALS AND RESULTS, 1940-45  
Index Numbers (1942 Actual = 100)

	Actual Numbers 1942	Index of Goals and Actual Results								Index of Potentials <sup>1</sup>						
		1940		1941		1942		1943		1944		1945	Actual	Esti- mate B	Esti- mate D	
		Actual <sup>2</sup>	Goal	Actual <sup>2</sup>	Goal	Actual	Goal	Actual	Goal	Actual	Goal					
<i>Number of Livestock on Farms</i>																
<i>Thousands</i>																
All cattle and calves, Dec. 31	79,114	90	94	95	100	96	104	97	103	98	101	102	96			
Milk cows, average for year	25,167	94 <sup>3</sup>	100	97 <sup>3</sup>	100	102	102	104	103	105	101 <sup>4</sup>	105	107			
All sheep and lambs, Dec. 31	55,775	97	100	102	100	99	93	93	86	88	79 <sup>4</sup>	99	93			
Hens and pullets, Jan. 1	426,226	92	5	89	100	5	114	124	121	111	110 <sup>4</sup>	113	115			
Sows to farrow, spring	9,650	85	5	80	100	5	126	107	95	99	85	6	104			
" " fall	6,814	70	5	81	100	5	111	101	72	85	81	6	99			
Pigs saved, spring	60,902	81	5	81	100	115	121	103	91	95	85	95	6			
" " fall	43,657	69	5	81	100	115	109	98	72	85	80	85	6			
<i>Farm Output of Livestock Products</i>																
<i>Millions</i>																
Milk (lbs.)	119,240	92	105	97	100	102	99	102	99	101	103 <sup>4</sup>	106	108			
Beef and veal, dressed weight (lbs.)	9,970	82	96	91	100	109	97	118	107	115	118	101	106			
Lamb and mutton, dressed weight (lbs.)	1,045	84	90	89	100	95	106	84	98	82	101	101	83			
Wool (lbs.)	392	95	125	99	100	5	98	5	88	5	82	6	94			
Pork, dressed weight (lbs.)	10,723	93	104	88	100	129	124	126	120	96	94	104	110			
Lard, (lbs.)	2,469	95	114	92	100	138	124	126	130	5	96	103	110			
Eggs (doz.)	4,028	82	95	86	100	108	112	114	122	108	114 <sup>4</sup>	115	114			
Chickens raised (no.)	795	78	5	90	100	5	117	112	94	94	103	100 <sup>7</sup>	109			
Broilers, commercial (no.)	205	64	5	84	100	5	122	102	115	104	152	98	98			
Turkeys raised (no.)	33	103	5	100	100	5	99	97	110	108	135 <sup>4</sup>	101	103			

<sup>1</sup> Estimates of maximum wartime agricultural production capacity prepared by the Bureau of Agricultural Economics, Agricultural Research Administration and the War Food Administration. For details, see Table 10 and related discussion in Chapter IV. Estimate A is omitted because most of its final estimates are not comparable in form with those given above.

<sup>2</sup> *Agricultural Statistics—1945*, pp. 285, 300, 312, 325, 334, 353, 371, 380, 381, 394, 400.

<sup>3</sup> *Agricultural Outlook Charts—1946*, p. 87.

<sup>4</sup> Preliminary.

<sup>5</sup> No goal established.

<sup>6</sup> Not estimated.

<sup>7</sup> Based on Estimate B's figure for 1945 as compared with its figure for 1942 and also on the accompanying textual statement that, "chicken and broiler production [should be maintained] about . . . at 1942 levels." It should be noted, however, that in this single instance the actual figure given for 1942 by this report is so erroneous compared with the verified figure recognized officially that Estimate B's numerical figure representing its maximum objective was likewise rendered inaccurate and hence necessitated reference to the *relative* change intended.

Source: Based on "Livestock Goals with Comparisons," a table attached to *Acreage Goals with Comparisons*.



Detailed comparison of Estimates B and D reveals a cluster of agreements relating to dairy and chicken adjustments and disagreements of significant proportions in regard to cattle, sheep and hog enterprises. Both proposed increases of 13-15 percent in the number of hens and pullets, and of about the same proportions in egg production; of 5-7 percent in the number of milk cows and of 6-8 percent in milk production; the only material difference in this area concerned the number of chickens to be raised annually. On the other hand, whereas Estimate B proposed an increase in cattle numbers and a decrease in the number of pigs to be saved, Estimate D proposed contrary adjustments in both cases. Moreover, although Estimate B suggested that the number of sheep and lambs be reduced only by about one percent, Estimate D called for a decrease of seven percent, the heaviest reduction in its schedule of proposals except for the accompanying and even more severe decrease in the output of dressed lamb and mutton.

Neither of these "maximum" programs conformed very closely to the changes suggested by considerations of productive efficiency. The latter called for a substantial increase in dairy production, a lesser increase in chicken undertakings, modest decreases in cattle and sheep numbers and a substantial reduction in the swine population. In regard to the first two of these, both estimates conformed to the extent of suggesting expansion, but lapsed somewhat by seeking a surprisingly modest gain in dairy operations and especially by proposing a much heavier gain in both hen and pullet numbers and egg production. With respect to the meat producing enterprises, four additional instances of divergence from the pattern of optimum productive efficiency may be cited: the more flagrant being Estimate B's proposal for an increase in the number of cattle other than milk cows and Estimate D's support for an increase in swine numbers; the lesser being Estimate D's excessive reduction affecting sheep and Estimate B's unduly timid proposal for reducing pig numbers. Taken together, these deviations represented evidence of further substantial shortcomings in the strategic conceptions which guided formulation of the agricultural mobilization program. It must be reiterated, however, that in this respect their effects fell far short of those generated by the conspicuous disregard of the need to press for a substantial reduction in livestock production as a whole.

#### 4. LIVESTOCK ADJUSTMENT GOALS

In view of the foregoing background of strategic conceptions, there is little occasion for astonishment in finding that the official annual goals, too, failed to press vigorously either for substantial reduction of total live-

stock production or even for shifting the relative proportions of the various livestock enterprises in the interests of maximizing the output of needed products from the feed concentrates consumed by animals. After all, goals represented merely a derivative stage in a mobilization planning process already committed to limited objectives. But their shortcomings had great significance from the standpoint of program execution, inasmuch as goals, unlike their antecedents, were publicized intensively and hence determined what farmers and the public thought needed to be done as well. Goals defined what adjustments the combined resources of the federal agricultural agencies sought to effectuate, and simultaneously provided the only concrete standards generally available for gauging the adequacy of resultant performance.

The widespread misconception that war urgencies necessitated the expansion of livestock production was hardly discouraged by the officially promulgated annual production goals. In respect to feed grains, for example, the goals presented in Table 11 called for increases which not only exceeded previous records but surpassed even the levels projected by the several estimates of maximum potentials—which were themselves seen earlier to have been unduly partial to livestock production. Since official provision was also made for supplementing anticipated production with accumulated grain reserves and with imports as well, it is apparent that the specific livestock goals, too, fostered the same misconception.

Livestock adjustment goals did reflect some earnest, though compromised, efforts to alter the composition of production along the lines suggested by considerations of productive efficiency. The goal for milk cow numbers was raised steadily throughout the war, but these advances were so minute that the peak in 1945 was barely 5 percent greater than the 1942 level. The goal for the year-end number of all cattle and calves on farms was consistently below the actual levels which prevailed, but the strength of this call for reductions was undermined by the fact that these goals were themselves rising each year. Goals also sought a reduction in the numbers of sows farrowed and pigs saved, but not until these had expanded by more than 40 percent between 1941 and 1943;<sup>13</sup> and even this call for liquidation was limited to 1944 alone, for by 1945 goals were once more seeking an increase over the actual results of the preceding year.<sup>14</sup> By sponsoring increases in the number of hens and pullets on

13 As late as November 20, 1942, Secretary of Agriculture Claude R. Wickard made a major radio address to farmers entitled, "We Can't Produce Too Many Hogs." Department of Agriculture news release.

14 In support of this call for an increase, War Food Administrator Marvin Jones addressed a special statement to hog producers emphasizing the incentives supporting Washington's request. (Department of Agriculture news release, April 23, 1945.)

farms and decreases in the total number of sheep and lambs, goals were once more seeking adjustments in accord with considerations of productive efficiency; but even in these instances the resultant contributions to efficient production were reduced by the fact that both adjustments were carried much too far relative to the requirements of an optimum program.

The fact that several reductions were introduced into livestock population goals in 1944, and again in 1945, led to some exaggerated impressions of the extent of the liquidation which was sought during these years. To rectify such perspectives, one had but to compare the goals established for 1945, representing the culmination of mobilization endeavors, with actual animal numbers in 1941, the year before the annual goals were instituted and itself a year of extraordinarily high livestock production. While revealing a decline of 14 percent in the goal for all sheep and lamb numbers at the end of the war period relative to the number in 1941, this comparison tends to emphasize primarily that increases were recorded in every other major category of the livestock population: measuring 3 percent in the case of all cattle and calves, 8 percent for milk cows, 12 and 16 percent respectively for pigs saved and sows farrowed, and 25 percent for hens and pullets. Thus, the belated adjustments which were proposed during the last years of the war did not call for reductions in livestock production either to the level justified by productive efficiency or even to the average levels prevailing during the years of peace; they merely sought the disgorgement of a part of the excessive gains in such production which had been generated during the war despite the serious limitations thereby placed on agriculture's potential capacity for the production of needed nutrients.

A review of the output goals for livestock products will be found to contribute little of major significance to the foregoing outline of official intentions with respect to livestock adjustments. Beef and veal goals were almost a direct reflection of proposed adjustments in cattle numbers, with some allowance for the tendency to market these animals at heavier weights. Goals for dressed lamb and mutton also followed reasonably closely on suggested changes in sheep and lamb numbers. In addition, however, the sharp reduction in lamb and mutton goals for 1944 reveals more clearly than the sheep population goals that agricultural officials were seeking to reverse the excessive decline in sheep numbers even before 1945. Annual output goals also suggest that efforts to curtail excessive gains in hog production were initiated in 1943, although no reduction was made in the goals for sows farrowed and pigs saved until the following year. But perhaps the most significant of these supplementary findings is that, despite innumerable official protestations about the urgent neces-

sity for expanding milk production, the annual goal for such output actually declined between 1942 and 1943, remained at the lower figure for 1944, and was then again reduced for 1945.

Livestock adjustment goals were thus vulnerable to criticism on a variety of grounds: for their failure to press for a substantial reduction in total livestock production; for the paltriness of the gains sought in milk cow numbers and milk production; for the thoroughly inadequate decreases recommended for cattle other than milk cows and for pigs; and for the comparatively excessive reduction sanctioned for sheep and lamb numbers. The seriousness of these shortcomings is to be measured not only by their adverse influence on the resultant performance of farmers and agricultural agencies but also by their helping to foster the widespread misconceptions about the very nature of the livestock adjustments required in the interests of all-out mobilization which in turn helped to perpetuate ill-advised policies.

What factors were responsible for official sponsorship of such proposals? Two influences, already familiar from our earlier analysis, may be mentioned: first, the grave under-estimation by responsible officials of the degree of agricultural mobilization necessary; second, and not entirely unrelated to the foregoing, their excessive readiness to deviate from the pattern of needed adjustments in deference to political pressures and popular preferences. The former expressed itself, in the case of livestock production, in a strategy reflected by annual goals which not only rejected the necessity for any net reduction in the scale of such output from the swollen level of 1941, but actually envisioned augmenting this level—by using pigs and chickens, which have a short growth-cycle, to supply a further increment in livestock production which could be expanded rapidly at the outset and which was also capable of being tapered off as quickly as might be required by the expected depletion of feed supplies during the later years of the war. Thus, in contrast to the sharp rise and subsequent decline in official objectives relating to pigs and chickens, the combined goal for milk cows, other cattle and calves and all sheep and lambs, expressed in terms of animal units—which are computed by weighting the numbers in each category by their relative consumption of grain at prevailing feed ratios<sup>15</sup>—rose slowly but without a single reversal from 1941 through 1945.<sup>16</sup> Evidences of eagerness to propitiate producer prefer-

15 In computing the number of "grain-consuming animal units," "one milk cow is considered as one animal unit; other cattle, 0.51; . . . sheep, 0.04; hogs, 0.87; and chickens, 0.045 animal units." (*The Feed Situation*, February-March 1946, p. 18.)

16 The combined goal for these three categories (in thousands of grain-consuming animal units) rose from 52.7 in 1942 to 54.3 in 1945, compared with an actual total for 1941 of 52.5.

ences, possibly reinforced by a desire to prevent the widening of invidious gaps between goals and results, took two forms: a progressive withdrawal from goals which failed to elicit commensurate shifts in production, e.g., goals relating to milk production and to the number of all cattle and calves; and a hastening to sanction unsolicited adjustments, as in the case of all sheep and lamb numbers.

### 5. LIVESTOCK ADJUSTMENT RESULTS

As might be expected from the tenor of previous findings, livestock adjustment results diverged even further than did goals from the patterns counseled by need and by considerations of productive efficiency. Before comparing performance with official objectives, however, actual developments will be reviewed in some detail.

#### *Aggregate Feed Supplies and Livestock Production*

Among the wartime adjustments directed toward maximizing the output of needed nutrients, none was of greater significance than those concerned with the production and supply of feed concentrates. Thus, the most effective means of ensuring the desired reductions in livestock production would have been to contract the supply of feed concentrates available for such purposes. Moreover, the most significant means of expanding the resources available for producing crops for direct human consumption would have been to shrink the proportion devoted to the production of feed grains. Unfortunately, however, the adjustments which materialized in respect to feed concentrates tended more to obstruct than to help the fulfillment of mobilization requirements.

Instead of being held to the levels prevailing in 1940, or being lowered appreciably below them in order to force corresponding reductions in livestock production, Table 18 shows that the total supply of feed concentrates increased by 24 percent between 1940 and 1942, and retained half of that increment even in 1945, after three successive though modest reductions. A small part of this gain was contributed by the greater production of by-product feeds, including oilcake and meal, animal protein feedstuffs, and a variety of grain millfeeds. By far the greater part was a product of measures more directly indicative of official intentions relating to livestock production during the war: greater imports, the heavier feeding of wheat and rye, and the expansion of feed grain production. Accordingly, the wartime increase in livestock production, which automatically diminished mobilization potentials, was not only stimulated by greater supplies of

TABLE 18  
FEED CONCENTRATES BALANCE AND LIVESTOCK PRODUCTION, 1940-45  
For Year Beginning October 1

	1940	1941	1942	1943	1944 <sup>1</sup>	1945 <sup>1</sup>
<i>Feed Balance (millions of tons)</i>						
Stocks of feed concentrates at beginning of year <sup>2</sup> .....	23.0	23.3	18.8	16.7	10.7	14.0
Total feed grains produced <sup>3</sup> .....	98.6	105.6	122.6	113.8	120.0	118.3
Other grains fed <sup>4</sup> .....	3.1	5.9	15.1	15.9	11.0	10.6
By-product feeds for feed <sup>5</sup> .....	16.3	16.7	18.6	18.8 <sup>5</sup>	19.4	17.4
Total supply of concentrates ....	141.0	151.5	175.1	165.2 <sup>6</sup>	161.1	160.3
Total concentrates fed .....	108.6 <sup>7</sup>	119.6 <sup>7</sup>	145.7	140.7 <sup>6</sup>	133.3	136.4
Feed grains for seed, human food, industry and export .....	10.9 <sup>7</sup>	13.3 <sup>7</sup>	13.0	12.5	14.9	13.0
Total utilization of concentrates, adjusted to crop year basis ....	117.6 <sup>7</sup>	132.8 <sup>7</sup>	158.4	154.5	147.1	149.7
Stocks of feed concentrates at end of crop year <sup>2</sup> .....	23.3	18.8	16.7	10.7	14.0	10.6
<i>Livestock Production (millions of units)</i>						
Number of grain-consuming animal units, Jan. 1 following .....	133.4	143.1	159.6	171.1	146.2	146.5
Livestock production, October-September, in terms of production units <sup>8</sup> .....	157.6 <sup>7</sup>	170.5 <sup>7</sup>	189.5	190.4	178.8	173.0
<i>Index Numbers of Changes in Feed and Livestock (1940=100)</i>						
Total supply of concentrates .....	100	107	124	117	114	114
Total concentrates fed .....	100	110	134	129	123	126
Number of grain-consuming animal units, Jan. 1 following .....	100	107	120	128	110	110
Livestock production, October-September, in terms of production units .....	100	108	120	121	113	110

<sup>1</sup> Preliminary.

<sup>2</sup> Farm, terminal market and Government-owned stocks of corn October 1, oats July 1, and barley June 1; stocks of sorghum grains not reported.

<sup>3</sup> Corn, oats, barley and sorghum grains.

<sup>4</sup> Imported grain and domestic wheat and barley.

<sup>5</sup> Oilcake and meal, animal protein feeds, and by-product mill feeds.

<sup>6</sup> Revised.

<sup>7</sup> Data supplied on request by Bureau of Agricultural Economics.

<sup>8</sup> An animal production unit is equal to 4,237 lbs. of milk, 314 lbs. of hogs, live-weight, 853 lbs. of cattle and calves, liveweight, 185 dozen eggs, 70 chickens produced, 20 turkeys produced, 116 broilers produced, 37 sheep and lambs on farms January 1, or 0.70 horse or mule on farms January 1.

Source: 1940-41—*Agricultural Outlook Charts—1946*, pp. 70-71; 1942-45—*Feed Situation*, May 1946, p. 6.

feed concentrates, but also derived encouragement from official efforts to augment such supplies.

Adjustments in the production of feed grains made additional contributions toward restricting the output of needed nutrients. In support of heavier livestock production, feed grain production provided about 70 per cent of the total supply of concentrates during the early years of the war

and 75 percent during the last two years, helping to offset the declines in carry-over and in other grains fed. The reduction in livestock production prescribed by considerations of productive efficiency was not an end in itself, however, but rather a necessary pre-condition to curtailing the production of feed grains in order to release further resources for expanding the output of crops for direct human consumption. That substantial quantities of resources were at issue is readily apparent. For example, if the total *acreage* of corn, oats and barley had merely been held down to 1940 levels, an average of some 10 million acres each year could have been diverted from feed grains to food crops during 1942-45. If average feed grain *production* had been held down to 1940 levels, even more resources could have been released for the production of food crops, inasmuch as the total production of feed grains during 1942-45 averaged 20 percent higher than in 1940. Even greater contributions to food crop production would have been possible if, in addition to the preceding, further reductions had been made in feed grain production to compensate for the supplementary supplies of concentrates provided during the war from imports, from the heavier feeding of wheat and rye, and from the reduction of accumulated stocks. In view of the very high levels of livestock production which prevailed in 1940, such limitations could hardly have been characterized as extreme. Indeed, a vigorous pursuit of maximum productive efficiency would have entailed far severer restrictions. Regrettably, however, even the most reasonable of these alternatives was disregarded—in official planning, it will be recalled, as well as in actual performance.

It should also be noted that the stimulus to greater livestock production, provided by the higher wartime levels of feed concentrates production and supplies, was not only sustained but materially intensified by the even larger gains recorded in the volume of such concentrates fed to livestock. Whereas the total supply of feed concentrates increased by 24 percent between 1940 and 1942, the amount fed to livestock rose by 34 percent; and, moreover, the wartime increment in total supplies declined by a significantly larger proportion during the succeeding two years than the increment in the amount fed to livestock. In addition to fostering wasteful gains in livestock production, however, such disproportionate increases in feeding also entailed two other disservices to effective mobilization: depletion of carry-over stocks of feed grains below the levels authoritatively considered to be safe;<sup>17</sup> and limitation of the supply of

17 From a previously cited address in Chicago on October 24, 1944 by J. B. Hutson, Director of Food Production in the War Food Administration, entitled, "The Need for Continued High Agricultural Production in the U. S.", Department of Agriculture news release, p. 3.

feed grains available for non-feeding purposes below the levels required to fulfill essential requirements. For example, the withholding of corn from industrial processors reached such severe proportions that it called forth vigorous protests from the Under-Secretary of War, the Under-Secretary of the Navy and the head of the War Production Board on the grounds of impeding the production of needed food and industrial products.<sup>18</sup>

The critical importance of feed concentrate policies in the wartime agricultural program is evident from the fact that although effective mobilization necessitated that livestock production, like other major components of agricultural output, be adjusted in the closest possible conformity to essential requirements, Table 18 reveals that such production actually responded very much more closely to variations in the availability of feed concentrates. Requirements, as has been noted, called for maximizing the output of needed nutrients and hence for reducing livestock production below peacetime levels. Instead, the average gain of 15 percent in the total supply of feed concentrates during 1941-45 as compared with 1940, and the even larger gain in the amount of concentrates fed to livestock, was accompanied by average increases of 15 percent in the total number of grain-consuming animal units on farms and of 14 percent in total livestock production as measured in "production units." Reasonable similarity is also to be found in their patterns of annual adjustment. Thus, while the total supply of concentrates and the amount fed to livestock both rose sharply until the year beginning in October 1943 and then commenced to decline, the beginning-of-the-year total of animal units on farms likewise rose rapidly until the outset of 1944 before decreasing, though the total output of production units lagged somewhat by merely leveling off during the feeding year 1943-44 prior to initiating its decline.

Additional considerations tend to bear out the inference that even the decline in livestock production during the latter half of the war was influenced more by the tightening feed situation than by any belated effort to rectify the earlier disregard of mobilization requirements. For example, the reduction in livestock production came only after the total supply of concentrates per animal unit had declined to 0.97 ton in 1943-44 from 1.10 tons during the previous year, and after the amount fed per animal unit had dropped from 0.91 ton in 1942-43 to 0.82 ton. When these ratios rose again in 1944-45, they were followed in turn by an increase in animal

18 In addition to urging immediate and basic corrective action, these officials also recommended that the government establish a stockpile of 50,000,000 bushels of corn to be earmarked for wet-grinding and dry-grinding corn processors. (*Business Week*, October 23, 1943, p. 78.)



units and by a slackening in the decline of total production units. Furthermore, the reduction in feed grain production in 1943, which might have been considered a move toward freeing additional resources for the production of crops for direct human consumption, proved to be but a temporary phenomenon, for the 1943 output was exceeded in 1944 and again in 1945.

*Adjustments in the Utilization of Livestock Production Resources*

Further analysis reveals that the major shortcomings already noted in respect to the need for reducing feed concentrates and livestock production were augmented rather than offset by the adjustments determining the effectiveness with which available livestock production resources were utilized.

The key requirement of effective mobilization in regard to altering the internal composition of livestock production, it will be recalled, was to sharply curtail the relative proportions of feed concentrates supplies made available to hogs, cattle other than milk cows, and sheep and lambs, and to divide the remainder between milk cows and poultry, with the former getting the bulk of the increase. Statistics on the distribution of all concentrates fed among the various categories of livestock are not available, but such data have been reported by the Bureau of Agricultural Economics for all grains fed,<sup>19</sup> which, as shown in Table 18, accounted for more than 85 percent of the total during the war. These data show that hogs consumed close to 35 percent of all grains fed during the feeding year beginning October 1, 1940, poultry about 19 percent, milk cows between 16 and 17 percent, horses and mules 15 percent, cattle other than milk cows 12 percent, and sheep and lambs about one percent, with the remainder of nearly two percent going to livestock in cities. Significantly enough, these proportions were not altered sharply during the war in any major category with the exception of horses and mules, whose share declined to between 10 and 11 percent or by almost one-third. Indeed, of the adjustments which did materialize among the other large categories, only the small gain recorded by poultry conformed to the direction of change urged by mobilization requirements. Between October 1941 and September 1945, the proportion of total grains fed which was consumed by hogs rose to an average of nearly 38 percent, the average proportion consumed by cattle other than milk cows remained virtually unchanged, and the average proportion consumed by milk cows actually declined slightly.

19 C. W. Crickman, *Feed Grains and Meat Animals*, Bureau of Agricultural Economics, mimeographed, November 1945, p. 26.

Lest the seriousness of these misdirected adjustments be obscured by their apparently minor proportions, it should be noted that the total amount of grains fed during the feeding years 1941-44 was approximately one-fourth greater than in 1940. Accordingly, the amount of grain consumed during the war increased by more than 35 percent in the case of hogs and poultry, by something over 25 percent in the case of cattle other than milk cows, and by only 18 percent in the case of milk cows. Particularly in regard to hogs and cattle other than milk cows, these heavy increases represented major reversals of mobilization objectives.

The obstruction of mobilization requirements relating to feed grain consumption led in turn to corresponding reversals of the changes required in the composition of the livestock population on farms. The proposed sharp reduction in the concentrates made available for primarily meat enterprises would have required, in accordance with their respective dependence on such feeds,<sup>20</sup> a very heavy decrease in hog numbers, a lesser but still substantial reduction in the number of cattle other than milk cows, and only a slight drop in the number of sheep and lambs. On the contrary, actual adjustments, as shown in Table 19, produced a heavy

TABLE 19  
LIVESTOCK NUMBERS ON FARMS, 1940-45  
Index Numbers (1940 = 100)

Year (Dec. 31)	All Grain- consuming Ani- mal Units <sup>1</sup>	Horses and Mules	Grain-con- suming Ani- mal Units, excluding Horses and Mules	Milk Cows	Cattle other than Milk Cows	Hogs	All Sheep	Chickens
1940 ..	100	100	100	100	100	100	100	100
1941 ..	107	97	109	104	106	111	105	112
1942 ..	120	95	123	106	113	136	103	128
1943 ..	128	91	133	109	119	154	95	136
1944 ..	110	87	113	109	118	110	88	121
1945 <sup>2</sup> ..	110	81	114	105	115	115	82	124

<sup>1</sup> Weighted by the relative consumption of grain by each class or species of animal. One milk cow is considered as one animal unit; other cattle, 0.51; horses and mules, 1.14; sheep, 0.04; hogs, 0.87; and chickens, 0.045 animal units.

<sup>2</sup> Preliminary.

Source: Based on *The Feed Situation*, February-March, 1946, p. 18.

increase in hog numbers, a lesser but still substantial rise in the number of cattle other than milk cows, and a reduction only in the category in which it was least necessary—sheep and lamb numbers. Thus, comparing their average year-end numbers during 1941-45 with the comparable figures for 1940, hog numbers increased by 25 percent during the war and

<sup>20</sup> For relative consumption of feed grains by various species of livestock, see footnote 1, Table 19.

the number of cattle other than milk cows by 14 percent, while sheep and lamb numbers declined by almost 6 percent. Performance was also somewhat out of line with the increases proposed for milk cows and poultry; for instead of reserving the larger part of the combined gain for milk cow numbers, these increased by an average of only 6 percent compared with 24 percent for chicken numbers.

A comparison of livestock population adjustments during 1940-43 with those effected during 1944-45 emphasizes that the decline in total grain-consuming animal units during the latter half of the war was not accompanied by any very marked progress in bringing the internal composition of the livestock population into closer conformity with the pattern recommended by considerations of productive efficiency. Although the sharp reduction in hog numbers during the calendar year 1944 was a major contribution, it was not heavy enough in itself to cancel the spectacular rise of 54 percent during the preceding three years; and it gave way during the very next year to a renewed upsurge. The decrease in cattle other than milk cows was also a move in the desired direction, but its significance was minimized by its minor dimensions and overshadowed by the proportionately heavier reduction in the wartime increment in milk cow numbers. Moreover, while considerations of productive efficiency might possibly have provided a reasonable case for maintaining chicken and sheep numbers at the levels reached at the end of 1944, they would have offered stronger grounds for further reducing the former and increasing the latter than for the opposite adjustments which actually materialized during the following year. Incidentally, efforts to curb drastically both the number of cattle and calves and the number of sheep and lambs on feed, as well as efforts to reduce the average weight of hogs at slaughter to 220 pounds or less also elicited the familiar pattern of actual adjustments: progressive divergence from the desired direction of change during the early years of the war, followed by a partial but shortlived move toward rectification, only to revert once again to the earlier tangent.<sup>21</sup>

<sup>21</sup> The number of cattle and calves on feed, already at the highest level in more than a decade at the beginning of 1940, rose by 22 percent during the next three years, lost more than half of this increment the following year, and then rose to 15 percent above the 1940 level at the beginning of the last year of the war. (*Agricultural Statistics—1945*, p. 294.) The number of sheep and lambs on feed followed a similar course: rising by 19 per cent during the same early period, and then declining for only one year before turning upward again. (*Ibid.*, p. 315.) Hogs slaughtered under Federal inspection averaged 238 pounds liveweight during the year beginning in October 1940, rose during the next two years to an average of 256 lbs., declined for one year to 245 lbs., and then rose to the highest point of the war during the year ending in September 1945. (*Ibid.*, p. 310; *The Livestock and Wool Situation*, October 1945, p. 31.)

*Changes in the Output of Livestock Products*

In order to assess the effects of adjustments in the volume and allocation of feed consumption, it is necessary to examine changes not only in the livestock population on farms but also in the output of livestock products. Because of the close inter-relationship of these major components of livestock production, the desired shifts in the output of such products have already been foreshadowed, having either been the determinants of, or being themselves derived from, other mobilization requirements which have been discussed. Thus, the proposals to expand milk cow numbers substantially and to increase chicken numbers to a lesser degree were derived primarily from the fundamental need to effect corresponding gains in the output of milk and eggs. On the other hand, it was the basic requirement for shifting production resources from feed to food crops which gave rise to proposals for curtailing livestock numbers in varying proportions, and thereby called for the progressive reduction of related meat production after the initial rise which would have resulted from the proposed heavy increase in slaughter at the outset. In respect to results, however, as contrasted with the process of determining objectives, the causative relationships among these components were more one-sided—with the output of livestock products invariably dependent on the prior adjustments effected in feed consumption and in the livestock population, and hence necessarily reflecting any shortcomings in such antecedent measures.

It was to be expected that actual adjustments in the output of livestock products would be characterized by major deviations from the patterns required by mobilization similar to those which were found in respect to feed consumption and livestock population adjustments. Thus, as shown in Table 20, milk production, like the number of milk cows and their consumption of feed grains, was increased but much too inadequately. Egg and poultry production, too, followed the earlier patterns established by chicken numbers and by their consumption of feed grain in registering gains so far surpassing reasonable objectives as to constitute another reversal of mobilization proposals. Most serious of all, total meat production increased substantially instead of declining, again reflecting adjustments in aggregate feed grain consumption and livestock population.

Although the average number of milk cows on farms during the year increased less than was necessary, the expansion of milk production during the war was limited primarily by the comparative failure to raise milk production per cow. The largest annual increment in milk production was achieved between 1940 and 1941, when the gain in milk cow numbers and the gain in output per cow contributed equally to the 6 percent advance.

TABLE 20  
OUTPUT OF MAJOR LIVESTOCK FOOD PRODUCTS, 1940-45  
Index Numbers (1940 = 100)

Year	Milk, on farms (wt.)	Beef and Veal (dressed wt.)	Lamb and Mutton (dressed wt.)	Pork (dressed wt.)	Total Meats (dressed wt.)	Chicken (dressed wt.)	Turkey (dressed wt.)	Total Meats and Poultry (dressed wt.)	Eggs, on farms (no.)	Lard (wt.)
1940	100	100	100	100	100	100	100	100	100	100
1941	105	112	105	95	103	109	97	103	105	97
1942	109	122	119	108	114	123	103	115	122	105
1943	108	119	126	134	127	157	97	130	137	130
1944	108	132	117	130	130	143	115	131	146	137
1945	112 <sup>1</sup>	144	120	101	121	153	141	125	139 <sup>1</sup>	91

<sup>1</sup> Preliminary.

Source: 1940-41—*Agricultural Statistics—1945*, pp. 334, 352, 387, 400; 1942-45—"Livestock Goals with Comparisons," *op. cit.*

In 1942, a further increase in milk cow numbers permitted milk production to expand by an additional 3 percent, although the average output per cow declined very slightly. This decline was intensified during the next two years, when the output per cow declined to below its 1940 level and thereby more than offset the steady gain in milk cow numbers, which were 10 percent greater in 1944 than in 1940. The recovery of output per cow in 1945 enabled milk production to reach a new peak, despite a small decrease in milk cow numbers, but the resultant output per cow was still only one percent higher than in 1941.

In general, the output of chicken enterprises followed a similar course to that described by the year-end number of chickens on farms, although surpassing the gains registered by the latter. Average output during 1941-45 exceeded 1940 levels by 29 percent and 79 percent respectively in regard to the number of chickens and commercial broilers raised, by 37 percent in the dressed weight of chickens, and by 36 percent in the production of eggs. After three successive years of expansion, the output of these products in 1943 exceeded their 1940 levels by the following extraordinary margins: the number of chickens raised, by 50 percent; the number of broilers raised, by 91 percent; the dressed weight of chickens, by 57 percent; and egg production, by 37 percent. Some progress was achieved thereafter in redressing these excessive gains, but, as in many other instances, such progress was both small and short-lived. Reductions materialized in the first three of the foregoing categories in 1944, which, however, only reduced the dressed weight of chickens to 43 percent above its 1940 total. But during the following year output rose briskly once more in all three categories, the number of broilers raised actually reaching a new peak 138 percent above the 1940 level. Progress in curtailing the wartime increment in egg production was hardly greater, for such output continued to expand in 1944 and did not decline enough in 1945 even to return to its 1943 level.

Wartime changes in meat output were contrary to the requirements of all-out mobilization not only in respect to the direction of such changes, but, even more seriously, in respect to the contributory adjustments by which these results were effected. Instead of rising briefly at the outset and then declining steadily thereafter, as would have been necessary to maximize the output of needed nutrients, the total weight of dressed meat and poultry rose steadily from 1940 through 1944, averaging 21 percent above the exceptionally high 1940 level during 1941-45 even despite a modest decline in 1945. The consequent setback to mobilization objectives was intensified by the fact that this substantial gain was derived primarily

not from the progressive reduction of livestock numbers, which would have permitted increasing shifts of resources from feed to food crops, but rather as the natural product of rising levels of livestock production, which involved the expansion of demand for feeds. It is apparent from a comparison of Tables 19 and 20 that the number of grain-consuming animal units on farms excluding horses and mules rose somewhat more rapidly during 1940-43 than the output of dressed meat and poultry. Of course, the sharp reduction in livestock numbers, especially of hogs, certainly contributed heavily to the output of meat in 1944, which actually surpassed the previous year's record. By 1945, however, the total of meat-producing animal units was once more on the upswing. Adjustments in sheep operations represented the only conspicuous exception to this general relationship between meat output and livestock numbers, and hence may be reviewed to illustrate the relationship counseled by considerations of maximizing agriculture's over-all productive efficiency. The output of dressed lamb and mutton increased by one-fourth between 1940 and 1943 and remained comparatively high during the next two years as well, exceeding the 1940 level by 20 percent in 1945. This was accomplished through the steady reduction of the number of sheep and lambs on farms, beginning in 1942; and yet the number on farms at the end of 1945 was only 18 percent below the 1940 level.

The failure to conform to the mobilization requirement of major readjustments in the composition of the livestock population on farms led in turn to the absence of any major alterations in the composition of meat output. Of the total output of 21,418 million pounds of dressed meat and poultry in 1940, pork contributed 46.5 percent, beef and veal 38.1 percent, chickens 11.3 percent, and lamb and mutton 4.1 percent.<sup>22</sup> During the next few years, adjustments in these components differed both in the timing and in the amplitude of their increases and decreases, as may be seen from Table 20. Between 1943 and 1945, for example, beef and veal increased from 119 percent of 1940 to 144 percent, pork decreased from 134 percent of 1940 to 101 percent, and dressed chicken output fluctuated within the comparatively narrow range between 157 and 143 percent of 1940. With respect to timing, it may be noted that beef and veal output decreased in 1943 while all of the others increased, that in 1944 these others all decreased while beef and veal increased, and that in 1945 it was pork output which declined while the others moved upward. Nevertheless, the closeness with which the general 1940 pattern was paralleled during

<sup>22</sup> Based on *Agricultural Statistics—1945*, pp. 334 and 387 and "Livestock Goals with Comparisons," *op. cit.*

the war, despite widespread impressions to the contrary, is evident from the fact that these components accounted for the following average shares of total meat output during 1941-45: pork 43.5 percent, beef and veal 39.7 percent, chickens 12.8 percent, and lamb and mutton 4.0 percent.<sup>23</sup>

Summarized briefly, the actual changes which materialized during the war were directly contrary to those required in the interests of maximizing the output of needed nutrients not only in respect to aggregate livestock production but also in respect to adjustments in feed concentrates production, supplies, consumption and allocations; in the total size as well as in the patterning of components of the livestock population; and in the volume and composition of livestock products produced. All of these adjustments contributed to the fundamental shortcoming in the mobilization program represented by the over-expansion of livestock production, but their contribution took that form primarily because such was the strategic orientation of the production cycle in which they were closely articulated links. The key issues of livestock mobilization were: first and most important, whether such output would be decreased substantially in order to free additional resources for the production of food crops; and, second, whether the customary patterns of utilizing such resources as were available for livestock production would be altered so as to maximize the yield of needed nutrients. Whether based on consciously formulated policies or not, the strategic direction of the wartime livestock production program was determined in practical terms, therefore, by the effectiveness of action taken to reduce feed grain production—which was central to the first issue—and by the effectiveness of the action taken to alter the composition of the livestock population on farms—either through the re-direction of feed concentrates consumption or through such means as changes in slaughter rates. It was the absence of effective measures such as these that constituted the fundamental obstruction to thorough-going livestock mobilization and that, in turn, engendered adjustments contrary to mobilization requirements at the various other stages of the integrated production cycle.

## 6. LIVESTOCK ADJUSTMENT POTENTIALS, GOALS AND RESULTS

The foregoing sections of this chapter have examined livestock adjustment potentials, goals and results, and have also compared each with basic wartime requirements and attendant considerations of productive efficiency. Hence, in order to trace the emergence of the pattern of gaps between needs and results which was presented in the immediately preced-



ing section, it is necessary only to examine the relationship between each of the successive stages in the mobilization process.

Analysis reveals that, in general, each of the successive stages in the livestock mobilization process contributed to further widening the eventual gap between needs and results. In order to concentrate such comparisons on the most significant elements of the adjustment program, the list covered in Table 17 was modified in 3 respects: by converting the data relating to sows farrowed and pigs saved to an annual basis, so as to prevent a doubled weighting of these items; by omitting wool production, inasmuch as no goals were established for it subsequent to 1942; and by including the combined total for dressed beef and veal, lamb and mutton, and pork in the list because of the emphatic interest in aggregate meat output.<sup>24</sup> Accordingly, the findings which follow are based on 16 categories.

Potentials represented the first major step away from needs and toward the lesser attainments in which the mobilization effort eventuated. The margin between the scale of needed adjustments and the targets set by both of the "maximum capacity" proposals were of significant proportions<sup>25</sup> in 12 cases and shrank to insignificance in only two, egg production and commercial broilers raised. In each of the two remaining cases, chickens raised and sheep and lamb numbers, one of the potentials was significantly at variance with needs while the other was not.

The level of potentials was also clearly differentiated from that characterizing the next stage in the process, goals. There was a significant gap between both estimates of potentials and the highest point of goals in 12 cases. In 11 of these, both of the potentials occupied a position intermediate between needs and the high point of goals, whereas the latter stood between needs and both of the potentials only in the single instance of cattle and calf numbers. In respect to milk cow numbers, milk production, and dressed lamb and mutton output, one potential was located between needs and the high point of goals, while the other was sufficiently further removed from needs to approximate the goal peak. It may be noted at this point that egg production constituted the solitary instance in which the

<sup>24</sup> Dressed poultry had to be omitted from this additional item because it was not made the focus of any official goals.

<sup>25</sup> Differences were considered to be of significant proportions when they were at least one-fourth as large as the distance from zero of the smaller of the two items being compared. In instances where this smaller item was removed from zero by less than five percent, differences were considered significant only when they came to at least two absolute percentage points, e. g., the difference between an increase or decrease of 2 percent and one of 4 percent was considered to be not significant so far as these comparisons were concerned.

usual gaps between needs and potentials and between potentials and the high point of goals were both telescoped into insignificance.

The level of maximum goals represented a still further retreat from estimated needs. Such goals were generally closer to needs than were the maximum adjustments actually achieved. Maximum goals were also significantly differentiated from the latter—although the frequency of significant gaps between successive stages, which had come to 14 out of 16 categories in the comparison of needs with potentials, and to 12 in the comparison of potentials with maximum goals, was down to 10 in the present comparison of maximum goals with maximum adjustments achieved. In eight of these instances, maximum goals were the closer of the two to needs, while maximum adjustments achieved were the closer to needs only in respect to dressed lamb and mutton and in respect to total dressed meat excluding poultry. The six instances in which maximum goals and maximum adjustments were not significantly differentiated consisted of the numbers of hens and pullets, sows farrowed, and pigs saved as well as of the output of pork, lard, and beef and veal.

The foregoing pattern of progressive divergence was partially modified, of course, toward the end of the war when, as has been seen, a variety of efforts were made to mitigate in some measure the substantial maladjustments relative to needs which had materialized previously. These attempted correctives are reflected in comparisons of the high point of goals with that for 1945, and of the high point of actual adjustments with results for 1945. The former reveals that final wartime goals had moved back from their peak levels to a position significantly closer to estimated needs in six of the sixteen categories: hens and pullets, sows farrowed, pigs saved, dressed pork, all dressed meat, and chickens raised. Corrective reversals were even more frequent in respect to actual results, for results in 1945 moved significantly closer to estimated needs than had maximum wartime adjustments in no less than 10 categories, including cattle and calf numbers, dressed lamb and mutton, lard production and egg production, in addition to the six categories in which 1945 goals, too, had been brought closer to needs. In view of the broad coverage of these efforts at rectification, it is particularly regrettable that, as has been brought out previously, such belated attempts were in most instances unduly short-lived and that their results generally fell considerably short of rectifying earlier shortcomings.

The foregoing data also have some bearing on the allocation of responsibility for shortcomings in livestock mobilization. The proportion of the gap between needs and results sanctioned by goals may be considered

suggestive of the role of timid or misguided leadership in encouraging such costly deviations; the residual proportion may be taken to indicate the influence of factors intervening between goals and results, of which the most important was the effectiveness of official program execution and its attendant effect on the co-operativeness of producers. It is of highly serious import, therefore, that the gap between needs and maximum war-time goals accounted for significantly less than one-half of the gap between needs and maximum actual adjustments in only 3 cases out of 16, that it was equal to one-half of the gap between needs and peak results in 2 cases, and that it was equal to two-thirds or more of the gap between needs and peak results in no less than 11 cases.<sup>26</sup> Nor was this unfavorable reflection on official planning moderated in any degree by the fact that the rectification of results outran that of goals toward the end of the war—with the consequence that in 1945 results were actually closer to needs than goals were in a majority of the 12 categories in which goals and results were significantly differentiated from one another.<sup>27</sup>

Attention may now be directed to the inter-action of plan and performance on a year-to-year basis during the period under review. This may be examined by reference to the 52 pairs of annual goals and results in Table 17, 21 during 1942 and 1943 and 31 during 1944 and 1945, associated with the same 16 categories of livestock production as were referred to above. Viewed broadly, it will be seen from these data that both goals and results supported expansion during the first half of the period and then tended downward. Thus, a comparison of each year's goals with the actual results for the preceding year reveals that official proposals sought 16 increases and 5 decreases during 1942 and 1943 and sought 14 increases, 15 decreases and 2 "no changes" during the succeeding two years. Similarly, a comparison of each year's actual results with the actual results for the preceding year discloses 18 increases and 3 decreases during the earlier period and 15 increases and 16 decreases during the later one. Despite the parallelism of the foregoing sets of figures, however, it would be erroneous to infer that the relationship between

<sup>26</sup> Dressed lamb and mutton, egg production and broilers raised constituted the three categories in which the high point of goals was further removed from the high point of actual adjustments than from the needed levels of adjustments. The two categories in which the high point of goals was about mid-way between needs and the high point of actual adjustments were turkeys raised and all cattle and calf numbers.

<sup>27</sup> The absence of any goal for lard in 1945 left 15 categories. Differences between final goals and results were not significant in three. Among the remainder, goals were closer than results to the needed levels of adjustment in 5 categories, while results were the closer of the two in seven.

proposed and actual adjustments was one of even reasonably close conformity.

Reviewing livestock adjustments item by item, and considering their magnitudes as well as merely their upward or downward directions, one finds that discrepancies between proposals and results were so frequent and so large as to reflect most unfavorably on the effectiveness of official program execution. Of the 52 cases, only one in five resulted in adjustments which were less than 25 percent greater or smaller than had been recommended. In four cases out of five, adjustments were either at least 25 percent greater or smaller than had been sought or were contrary to the very direction of change proposed; in two out of three, actual adjustments were at least 50 percent greater or smaller than had been sought or moved in the opposite direction to that proposed; and these reversals alone accounted for one case out of every three.<sup>28</sup> It may also be of interest to note that neither the incidence nor the magnitude of these discrepancies gave evidence of any significant improvement in the effectuation of official objectives during the latter half of the period.<sup>29</sup>

#### 28 Relation of Actual to Proposed Livestock Adjustments, 1942-45<sup>1</sup>

Based on comparison of percentage change resulting with percentage change sought when both are measured from the actual result for the preceding year

Increase proposed .....	30	Decrease proposed .....	20
Actual increase at least 50% greater than proposed .....	5	Actual decrease at least 50% greater than proposed .....	4
Actual increase 25-49% greater than proposed .....	3	Actual decrease not significantly different from proposal <sup>2</sup> .....	3
Actual increase not significantly different from proposal <sup>2</sup> .....	8	Actual decrease at least 50% less than proposed .....	5
Actual increase 25-49% smaller than proposed .....	3	Actual result was increase .....	8
Actual increase at least 50% smaller than proposed .....	5	No change proposed .....	2
Actual result was decrease .....	6	Actual result was substantial increase .....	1
		Actual result was substantial decrease .....	1

<sup>1</sup> Covers all categories in Table 17 except for following changes: sows farrowed and pigs saved both shifted to annual basis; wool production omitted; total dressed meat output excluding poultry added.

<sup>2</sup> Disparities between proposals and results were not considered significant unless the result was at least 25 percent greater or smaller than the proposal. When goals proposed an adjustment of 5 percent or less, results were not considered to be significantly divergent unless they exceeded or fell short of the proposal by at least 2 percentage points on an absolute basis.

<sup>29</sup> For example, disparities were of insignificant proportions in 6 cases out of 21 during 1942-43 and in 5 cases out of 31 during 1944-45. On the other hand, disparities of at least 50 percent and actual reversals together numbered 13 during the earlier period and 22 during the later one.

These shortcomings in the accomplishments of the executive arms of the wartime agricultural adjustment effort were unquestionably serious relative to the tasks assigned by annual goals. Nevertheless, such inadequacies in performance seem to have contributed much less to the fundamental deficiencies of livestock mobilization than did the costly misdirection traceable to official planning of goals—which encouraged the bulk of the aggregate deviation of actual results from the needed levels of adjustment during the upsurge, and whose leadership thereafter in seeking to correct earlier maladjustments was lacking both in vigor and in steadfastness. As a final summary judgment, however, it should be emphasized that even the deficiencies in planning concerned with internal readjustments in the utilization of livestock resources contributed less to the basic shortcomings of agricultural mobilization as a whole than did those more deeply rooted deficiencies in planning which not only sanctioned, but actively encouraged, the expansion of total livestock production, and with it the expansion of feed grain production.

Briefly put, the preceding chapters have stressed that agriculture's failure to maximize the output of needed nutrients during the war was due both to the excessive expansion of livestock production relative to that of crops for direct human consumption, and to the inadequate redirection of the resources available within each of these two primary sectors of production along the lines counseled by considerations of productive efficiency.

There has been increasing realization, especially since the closing period of the war, that such shortcomings added to the wartime burdens of our allies, caused widespread suffering in liberated areas, severely retarded the recovery of war-shattered economies, and undermined the effectiveness of this country's efforts to consolidate an enduring peace. There may be interest, however, in recalling some of the burdens imposed by these shortcomings on other sectors of the domestic war effort, especially as these help to illustrate the extraordinary intricacy of economic relationships with which attempts at centralized planning must cope. In its issue dated October 23, 1943, *Business Week* reported that officials of the War Production Board were scathingly indicting the inflated hog for impeding war programs "ranging from adhesives and asbestos to iron ore and petroleum."<sup>30</sup> Their more specific accusations were reported to have included the following:

<sup>30</sup> *Business Week*, October 23, 1943, p. 110.

1. That the inadequate flow of corn from the Mid-West to such deficit feed areas as the North-East dairy region necessitated the granting of priorities on Great Lakes shipping to wheat imports from Canada, and thereby materially reduced iron ore shipments.
2. That excessive consumption by hogs so seriously reduced the supply of grains available for industrial alcohol and rubber production as to require the importation of Cuban molasses for these purposes, thereby diverting tankers from the transport of petroleum.
3. That the excessive feeding of skim milk to hogs retarded the production of casein and hence necessitated its importation from Argentina in order to supply demands in the manufacture of adhesives required for the production of paper, textiles, plastics, building materials and other commodities.

Another of the undesirable effects of shortcomings in the wartime adjustment of feed and livestock enterprises was the excessive depletion of the grain reserves which constituted a safeguard against possible natural catastrophes. Also worthy of mention in this connection is that the accompanying price policies in so important a component of farm production undoubtedly were a source of powerful upward pressure on agricultural prices as a whole and, through them, on the general price structure of the national economy.

In tracing the genesis of shortcomings in livestock mobilization, it is apparent that much of the responsibility for them could reasonably be attributed to deficiencies in the planning and in the effectuation of official objectives. The very substantial gap between estimated needs and the valuations of production potentials propounded by official agencies was probably due in part to a serious under-estimation at the policy-making level of the scale of eventual requirements—possibly induced by basic conceptions which were molded and hardened during the long years of struggle to cope with seemingly endless surpluses—and also in part to an under-estimation of what could be accomplished in the face of anticipated physical, political and psychological obstacles. Efforts to account for the further gap between estimated potentials and officially established goals must allow consideration to a variety of factors of which the most important seemed to be an inordinate timidity on the part of responsible officials in the face of open disregard of and resistance to needed proposals—a timidity which actually served to nurture rather than to curb further maladjustments and the misconceptions which reinforced them. This extreme sensitivity to potential difficulties led to an exaggeratedly gradualist approach which was evidenced in such ways as the following: in the widespread but ambiguous pronouncements about needs which stressed the

scale of requirements without, however, effectively dispelling the popular impression that this called for gross expansion instead of for carefully channeled conversion; in the establishment of goals during the earlier years suggesting adjustments which were too peripheral and far too pale to flag down the powerful momentum of maladjustments which had in numerous instances been burgeoning for years, and some of which had even been officially encouraged; in the tacit sanctioning of undesirable actual adjustments by the consequent sympathetic modification of disregarded goals; and, finally, in demonstrating the far-reaching identification of official thinking with producer and consumer misconceptions about the nature of the wartime task of agricultural mobilization, by offering active leadership in 1945 to renewed efforts to expand livestock production.

The gaps between annual goals and results must surely be considered to have been of significant proportions in view of the finding that in two cases out of three resulting adjustments were at least 50 percent greater or smaller than had been recommended, in respect to crop acreage as well as livestock production shifts. Responsibility for these shortcomings in the effectuation of official objectives devolved primarily, of course, on the government agencies charged with carrying out established policies, and hence were necessarily the product either of policy inadequacies, administrative weaknesses, or both. Such over-simplified classification, however, offers little analytical insight into the causes of the serious shortcomings in mobilization achievements. Program execution encompassed the education of producer, distributor and consumer groups relative to what needed to be done, why and how; it involved the management not only of land and livestock resources but also of such other productive resources as labor, machinery, fertilizers and credit; it required the formulation of appropriate incentives and coercions to maximize co-operation in proposed adjustments; it included the control of food allocations and the guidance of distribution and consumption; and it necessitated the integration of this country's efforts and resources with that of other lands in order to maximize the resultant aid to the Allied war effort. Thus far, we have examined only the extent to which the management of land and livestock resources contributed to deficiencies in the final results. Accordingly, succeeding chapters will further this inquiry into the basic causes of mobilization shortcomings by exploring the adequacy of performance in respect to the other major and inter-acting components of the wartime task.

## CHAPTER VI

### AGRICULTURAL MANPOWER

IN view of the obviously important role of labor among the factors of production applied to the soil, one might well have anticipated that the confusions and distortions relating to wartime requirements which were evident in all phases of agricultural mobilization would reach particularly serious proportions in respect to the manpower available for farm operations. Exaggerated apprehensions, misinterpreted facts and unverified allegations, all widely publicized, in turn prompted ill-considered remedial measures by Congress and by executive agencies which not infrequently served only to further ensnarl the intricate problems of effective manpower allocation.

#### I. FARM LABOR SUPPLY

The long prevailing net outflow of population from rural areas was heavily swollen during the war, and especially during its early years. Departures for non-farm areas which had declined from an annual average of 2.1 millions during 1922-30 to 1.3 millions during the succeeding depression decade rose sharply back to 2.1 millions during 1940-45. Arrivals from non-farm areas, which had decreased from an annual average of 1.5 millions during 1922-30 to one million during 1931-39, remained at that level during 1940-44. As a result, the average annual net outflow to non-farm areas rose to one million during 1940-45, or to well above the 1922-30 rate and to double the average of the pre-war decade. Departures decreased and arrivals increased after 1942, reducing by almost three-fourths the average annual outflow between 1941-42 and 1943-45, but even the latter period's average outflow of nearly 600,000 persons represented a substantial drain.<sup>1</sup> Indeed, it was estimated by the Secretary of Agriculture that, "Between 1940 and 1945 the net loss through civilian and military migration was approximately 4.5 million actual or potential farm workers."<sup>2</sup> He also called attention to the fact that, "Many other persons shifted from farm work to non-farm work while continuing to live on farms."<sup>3</sup>

<sup>1</sup> For changes in the farm population through migration during 1922-30, see *Agricultural Statistics—1944*, p. 643. For later data, see *Agricultural Statistics—1945*, p. 528.

<sup>2</sup> U. S. Department of Agriculture, *Report of the Secretary of Agriculture, 1945*, U. S. Government Printing Office, 1946, p. 71.

<sup>3</sup> *Ibid.*



Despite their indisputable significance, the foregoing data encompassed but one segment of the farm labor supply situation: the effects of migration on the size of the population from which most agricultural workers are drawn. Nevertheless, they were often cited as ample confirmation of the extreme shortage of manpower on farms. Such reasoning necessarily implied that the pre-war balance between farm labor supply and demand had been close, that the ratio of farm workers to farm population was comparatively inflexible and that agriculture had no access to non-farm manpower in the course of crop production. In reality, not one of these assumptions was justified.

Most of the impact of withdrawals from the labor force available to farmers was absorbed by the large reservoir of unemployed and under-employed manpower with which agriculture entered the period of accelerated defense preparations. A Congressional committee reported after extensive hearings and analysis that in 1940 the U. S. possessed "a reserve of unused or ineffectively used manpower pressing upon the agricultural labor market of at least 5 million workers."<sup>4</sup> This was one reason why total farm employment did not reflect any decline comparable to the huge out-migration noted above. Another reason for the relative stability of farm employment levels was that the large numbers leaving for non-agricultural occupations and military service were replaced by an almost equally voluminous inflow from the farm population of women, older men and children not hitherto a part of the working force.<sup>5</sup> Children growing old enough to help alone added some 250,000 to the manpower pool each year.<sup>6</sup> A study of wartime changes in the composition of farm employment led the Bureau of Agricultural Economics to estimate, as shown in Table 21, that even as early as 1943 there would be about twice as many women over 14 years of age and twice as many children under 14 years of age working on farms as had been the case in 1940.

<sup>4</sup> *Report of the Select Committee to Investigate the Interstate Migration of Destitute Citizens* (Tolan Committee), House Report No. 369, U. S. Government Printing Office, 1941, p. 403.

<sup>5</sup> U. S. Department of Agriculture, *Final Report of the War Food Administrator*, 1945, U. S. Government Printing Office, 1945, p. 27.

<sup>6</sup> "Normal growth in the working age group of the rural farm population is estimated at an annual rate of about 165,000 males and about 200,000 females; only a part of this increase in females of working age entered the labor force, whereas substantially all of the males did." (*Memorandum on Manpower in Agriculture for 1943*, Bureau of Agricultural Economics, mimeographed, March 1943, p. 3.)

TABLE 21  
ESTIMATED SHIFTS IN COMPOSITION OF FARM EMPLOYMENT, 1940-43  
On July 1 of Each Year

Employee Categories	1940	1941	1942	1943 <sup>1</sup>
	%	%	%	%
Workers under 14 years of age .....	5	6	8	9
Workers 14 years old and over .....	95	94	92	91
Living on farms and engaged primarily in farm work				
Males .....	69	67	61	56
Females .....	8	9	13	17
Not living on farms but engaged primarily in farm work	10	10	10	10
Working on farms at least 2 days a week but engaged primarily in non-farm work .....	8	8	8	8

<sup>1</sup> Projected composition assuming same level of employment and same number of non-farm persons employed in farm work as in 1942.

Source: *Memorandum on Manpower in Agriculture for 1943*, Bureau of Agricultural Economics, mimeographed, March 1943, p. 16.

Farm employment declined during the war, thereby continuing the trend which was apparent during the preceding decade and one-half.<sup>7</sup> But wartime reductions were substantially less severe than was suggested by widespread, and at times seemingly authoritative, reports.<sup>8</sup> According to the official reports of the Bureau of Agricultural Economics, the basis for Table 22, average farm employment in the U. S. declined by only 742,000, or 7 percent, during the entire period from 1940 to 1945, thus reflecting an average rate of reduction of little more than one percent per annum. Such curtailment exceeded the decrease of 546,000 experienced during the peacetime years 1935-40, but hardly to a degree indicative of extreme emergency pressures. Incidentally, although considerable attention was attracted among those concerned with agricultural manpower policies by the greater decline in the Bureau of Agricultural Economics' index of hired labor employment than in its index of family workers employed,<sup>9</sup> even this seemingly logical wartime development was rendered question-

<sup>7</sup> *Agricultural Statistics—1942*, p. 676.

<sup>8</sup> For example, the widely publicized survey of county agents conducted by the Department of Agriculture at Senatorial request reported that of 2,780 agents replying, 99 percent "indicated farm labor had been appreciably reduced by being absorbed by the military forces or industry." As to replacements for the labor that had gone, 73 percent of these county agents reported "no replacement", an additional 15 percent reported "less than 25 percent replacement", and only 2 percent reported replacement of 50 percent or more. (U. S. Senate Committee on Appropriations, *Investigation of Manpower Hearings*, Part 2, U. S. Government Printing Office, 1943, pp. 384-5.)

<sup>9</sup> Average farm employment of hired workers declined by almost 18 percent between 1940 and 1945 compared with a reduction of less than 4 percent in the employment of family workers according to the reports of the Bureau of Agricultural Economics, *Agricultural Statistics—1945*, p. 415; *Farm Labor*, December 1945, p. 6.

able by the field observation of a War Food Administration official that much of the adjustment may have been due to the increasing tendency of farmers to record the more readily mobile working members of the family as hired labor.<sup>10</sup>

TABLE 22  
TOTAL FARM EMPLOYMENT, MONTHLY, 1940-45  
Thousands

Month	1940	1941	1942	1943	1944	1945
January .....	8,543	8,428	8,287	8,171	8,202	8,005
February ....	8,568	8,524	8,540	8,369	8,383	8,051
March .....	8,939	8,775	8,738	8,730	8,562	8,414
April .....	9,686	9,580	9,483	9,308	9,080	8,982
May .....	10,836	10,683	10,796	10,492	10,068	10,017
June .....	11,991	11,685	11,917	11,659	11,285	10,994
July .....	12,338	11,929	12,009	11,749	11,355	11,100
August .....	11,403	11,138	11,249	11,020	10,608	10,612
September ...	11,757	11,421	11,390	11,502	11,040	10,907
October .....	12,161	11,988	11,921	11,938	11,839	11,052
November ...	11,211	10,749	10,879	10,698	10,690	10,747
December ....	9,590	9,428	9,551	9,519	9,337	9,245
Average ....	10,585	10,361	10,397	10,263	10,037	9,843

Source: 1940—Bureau of Agricultural Economics, *Farm Wage Rates, Farm Employment and Related Data*, mimeographed, January 1943, p. 156; 1941-45—Bureau of Agricultural Economics, *Farm Labor*, mimeographed, December 14, 1945, p. 6.

Ill-phrased, urgent warnings in the spring of 1942 and again in the spring of 1943 that agriculture would require 3 million more laborers helped reinforce prevailing misconceptions about the extent of the farm labor shortage.<sup>11</sup> The fact is, and Table 22 bears this out, that agriculture needs at least 3 million seasonal workers *every year* to supplement the force of farm operators, their families and their year-round "hands." Just about 3½ million were recruited in 1942, and about the same number again in 1943 as well as in succeeding years. While this recurrent task was never wholly without challenge, past experience certainly provided no solid ground for the hysteria that seemed to be generated periodically as Congress turned to the consideration of legislative measures relating to farm manpower.

10 George W. Hill, *Farm Labor Prospects—1945 and Post-War*, address presented at the Annual Agricultural Outlook Conference in Washington on November 14, 1944 and mimeographed by the Bureau of Agricultural Economics.

11 Continued emphasis on this theme on into the early summer, however, as was not uncommon, lacked even the virtue of accuracy to help offset its tendency to foster misconceptions inasmuch as July farm employment levels were generally the highest of the year or a close approximation of the annual peak. See, for example, the article headlined, "Wanted: 3.5 Million Workers to Help Farmers Gather in the Grains," *Wall Street Journal*, July 15, 1943.

Exaggerated notions about the severity of the farm labor shortage during the war were traceable not only to an over-estimation of the net decline in agricultural employment, but also to an over-estimation of the increase in manpower requirements necessitated by expanded production. Gross farm production required approximately 20.5 billion man-hours in 1940.<sup>12</sup> During the next few years, however, labor requirements did not keep pace with the rise in output, partly because of further mechanization, partly as a result of heavy gains in crop yields per acre and partly in consequence of shifts to crop and livestock enterprises making lesser demands on labor. Hence, although gross farm production rose by 14 percent between 1940 and 1942 and then remained at that average level during the succeeding three years,<sup>13</sup> the estimated labor required on farms increased by only two percent between 1940 and 1942 and averaged less than one percent above the 1940 level during the remainder of the war.<sup>14</sup> More striking still, although gross farm production was 15 percent greater in 1945 than in 1940, it required more than one hundred million fewer man-hours.

In short, the comparatively modest over-all proportions of the war-time farm labor shortage may be indicated by such facts as the following: between 1940 and 1942 the man-hour requirements of farm production increased by two percent while average farm employment diminished by two percent in volume and also deteriorated somewhat in skill and physical hardihood; during the next three years, average farm employment declined by an additional five percent, but this was mitigated somewhat by a three percent reduction in labor requirements; and, most important of all, the failure of farm labor shortages to effect any serious reductions in agricultural output was officially confirmed.<sup>15</sup> The resultant gap was bridged by heavier resort to farm machinery, as will be seen in the next chapter, and by a small increase in working hours. At its peak, which came in 1943, the average length of the workday had increased over that

12 See Table 24.

13 For indexes of gross farm production during 1940-45, see Table 4.

14 For estimated annual labor requirements for all farm work, see Table 24.

15 Thus, despite the dire predictions presented to Congress by various farm spokesmen during the spring of 1943 and despite the rash of scare headlines and stories during the harvest season, the War Food Administrator reported at the end of the year that, "...there were no significant losses in agricultural production in 1943 that could be attributed to a labor shortage." (*Food Program for 1944*, p. 49.) Despite a renewal of such threats during the following year, and despite the fact that agricultural production reached a new peak in 1944, the Bureau of Agricultural Economics again noted that no serious loss in production could be attributed to labor shortages. (*The Agricultural Situation*, January 1945, p. 3.)

of 1940 by almost 45 minutes for farm operators and by less than half as much for hired labor.<sup>16</sup> Further evidence of the absence of extreme pressure in this quarter is provided by the finding that despite a decrease in average farm employment during the next two years of four percent, the average number of hours worked daily by farm operators was reduced by almost 30 minutes while the time put in by hired labor actually declined to slightly below pre-war levels.

Although the foregoing data offer little evidence of a severe shortage in the total manpower available for agricultural production, nevertheless local farm labor shortages were encountered in numerous areas of the North East, the Corn Belt, the Mountain states and the Pacific Coast, particularly on dairy farms and in seasonal employments connected with the production of vegetables, fruits and sugar. The existence of such internal deficits despite the sufficiency of the over-all labor supply could be ascribed to four factors: under-employment of available farm workers, the diversion of labor to inessential crops, continued reliance on traditional inefficient methods of work, and the failure to encourage and facilitate the movement of agricultural labor from surplus to shortage areas.

## 2. UNDER-EMPLOYMENT

Under-employment on farms was to be found in a variety of forms. One of these alone, seasonal idleness, wasted at least one-fifth and often twice that proportion of the total man-hours available to agriculture in major producing areas.

In the cotton and tobacco regions, for example, hundreds of thousands were fully employed only two or three months in the spring and early summer and for another two or three months during the fall harvest period. "The slack work period of midsummer and the long idle winter months are well established institutions throughout the cotton and tobacco cash crop areas, and in many self-sufficient and subsistence farm areas where low rural incomes prevail."<sup>17</sup> Quantitative estimates, such as those presented in Table 23, indicated an annual average employment of only 50-60 percent of the total manpower available in the South,<sup>18</sup> with sea-

<sup>16</sup> For comparable data on the average number of hours worked daily by farm operators and hired labor at different seasons of the year during 1940-45, see the Bureau of Agricultural Economics' mimeographed monthly publication *Farm Labor* (titled *Farm Labor Report* prior to November 1943) for September and December 1943, and for March, June, September and December 1945.

<sup>17</sup> Arthur Raper and F. Howard Forysth, *Traditional Practices and Farm Labor Shortages*, Bureau of Agricultural Economics, mimeographed, January 1943.

<sup>18</sup> Based on unpublished estimates by the Labor Division of the Farm Security Administration of the type illustrated in Table 23.

sonal variation in utilization ranging from 15 percent to 80 percent. Serious seasonal under-employment was also prevalent in the wheat belt and in other areas of relatively undiversified agricultural production.

TABLE 23

NUMBER OF FARM WORKERS NEEDED AND ON-FARM LABOR SUPPLY; LOUISIANA, 1942;  
TEXAS AND OKLAHOMA, 1943

Month	Number of Farm Workers Needed			Ratio of "Workers Needed" to "Total On-Farm Labor Supply"		
	Louisiana 1942	Texas 1943	Oklahoma 1943	Louisiana 1942	Texas 1943	Oklahoma 1943
				(Percent)	(Percent)	(Percent)
January ....	93,000	520,416	157,507	28	49	45
February ...	114,000	522,397	159,407	34	49	45
March .....	220,000	524,560	159,407	65	49	45
April .....	263,000	536,166	164,708	78	50	45
May .....	275,000	671,697	164,408	82	63	47
June .....	144,000	718,152	239,512	43	67	68
July .....	45,000	462,353	221,580	13	43	63
August .....	175,000	453,390	130,714	52	42	37
September ..	245,000	854,369	241,203	73	80	68
October ....	209,000	846,676	261,090	62	79	24
November ..	114,000	735,246	259,323	34	69	74
December ..	114,000	500,537	200,844	34	47	57

Source: Farm Workers Needed: Louisiana—Louisiana State University, *Louisiana Farm Laborers and Total War*, Bulletin No. 436, May 1942, p. 8; Texas and Oklahoma—Unpublished estimates by the Agricultural Labor Specialist, Region VIII, Farm Security Administration, made available by the Labor Division of that agency.

Ratio of "Workers Needed" to "Total On-Farm Labor Supply": Louisiana—Bureau of Agricultural Economics, Arkansas Regional Office, *Some Effects of the War on Louisiana's Farm Population and On-Farm Labor Supply*, 1942, Unpublished; Texas and Oklahoma data from same source as above data on "Workers Needed" in those states.

Seasonal under-employment is a good deal less immune to remedial measures than might be suggested by the natural basis of crop production cycles. Planting, cultivation and harvest periods could in numerous cases have been extended beyond the traditional optima, with the assumption of risks which would have been small compared to the importance of freeing additional labor for undermanned sectors of the war economy. Mobilization undertakings, however, made no special provisions for seeking to promote such adjustments. At any rate, an examination of monthly employment levels during 1940-45 does not reveal any significant changes in the pattern of seasonality; nor, of greater importance, does it reflect any gains in reducing the range of seasonal variation.<sup>19</sup>

<sup>19</sup> If the data in Table 22 are used to compute the ratio of each month's employment to the annual average, and the results are averaged for 1940 and 1941 and again for 1944 and 1945, the resulting two series of monthly indices will be found to be remarkably alike, differences falling short of two percent in all but three months and

The considerable variation in the timing of labor requirements peaks for different crops emphasizes the enormous benefits which could have been derived from encouraging and actually facilitating the migration of seasonally unemployed farm workers to help ease temporary shortages in other states. Nevertheless, as will be seen later, specific legislative measures were enacted which had the foreseeable effect of preventing any substantial realization of such potentials and hence ensuring the continuance of widespread seasonal under-employment.

Another major category of under-employment was the partial inactivity on small farms imposed by the paucity of land and capital resources relative to the work capacity of the operator and his family. According to findings by the Bureau of Agricultural Economics in 1943, it would have been possible to "increase production through the addition of capital resources, thus making possible the more complete utilization" of the resident labor on approximately 1,650,000 of the nation's almost 6 million farms. In addition, there were some 640,000 farms so small in size or so infertile, relatively, that most of the operators and their families might have contributed more to war output through employment on larger farms or in war industries. Moreover, even these estimates of under-employment ignored whatever further potentials might have been available on approximately 500,000 farms operated by sharecroppers.<sup>20</sup>

Translated into manpower terms, Secretary of Agriculture Claude R. Wickard stated that during 1942 there was a 40 percent wastage of the manpower available on the 2,400,000 farms yielding a gross annual income of less than \$800 yearly, and a 25 percent wastage of the manpower available on the 485,000 farms yielding a gross annual income of \$800-\$1,000 yearly. The resultant loss of potential labor available to agriculture was estimated at between 400 and 600 million man-days per annum, or equal to more than 20 percent of agriculture's total manpower requirements.<sup>21</sup> Regionally, the Secretary pointed out that the cotton-producing states accounted for almost one-half of the total volume of potentially productive farm labor left idle in the nation, and that the Appalachian and

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falling short of three percent even in these cases. Uniformity in the range of seasonal variation is indicated by the fact that monthly indices varied from 81.0 to 116.0 during the earlier period and from 81.5 to 115.1 during the later one.

<sup>20</sup> Public letter from Dr. Howard R. Tolley, Chief of the Bureau of Agricultural Economics, to Robert Handschin of the National Farmers Union, dated February 20, 1943. These estimates were also discussed in *Senate Investigation of Manpower Hearings*, Part 2, pp. 318, 370.

<sup>21</sup> U. S. Department of Agriculture, *Report of the Secretary of Agriculture, 1942*, U. S. Government Printing Office, 1942, pp. 56-57.

Ozark areas were also heavy contributors to such waste.<sup>22</sup> It may be noted in this connection that the Appalachian area employed a farm labor force of about 1.3 million, although the labor requirements for its 1943 farm production goals were estimated at only 821,000 workers.<sup>23</sup>

A third source of under-employment was the haphazard fashion in which farm workers and vacant jobs were brought together. Dr. N. Gregory Silvermaster, Director of the Labor Division of the Farm Security Administration, described the process as one in which great numbers of workers were still looking for jobs on the basis of rumor, expending much time in waiting between jobs or in going to places where their labor was found not to be needed.<sup>24</sup> Perhaps the best index of the scope of this category of manpower wastage was the fact that even in the Farm Security Administration's Farm Labor Supply Centers, which represented a notable achievement toward regularizing the employment of migrant labor, resident workers were under-employed by at least one-third during 1942 and 1943.<sup>25</sup>

### 3. LABOR COST OF INESSENTIAL CROPS

Shortcomings in the utilization of agricultural manpower were not restricted solely to losses caused by under-employment. In the very midst of a nationwide manpower shortage that was actually hampering the production of critical war goods, and despite its own contention that an inadequate labor force was obstructing the realization of war production goals, agriculture fell far short of realigning its manpower allocations in accordance with the relative urgency of alternative agricultural employments.

<sup>22</sup> *Ibid.*, p. 57.

<sup>23</sup> Bureau of Agricultural Economics, *Manpower and Agricultural Resources in the Appalachian Region*, June 1943. Also note Dr. H. R. Tolley's testimony before Subcommittee on Technological Mobilization of Senate Military Affairs Committee: "In the Appalachian area, in the Ozarks area, in many places throughout the South and in some places in the West there are large numbers of people...who can better serve themselves, as well as their country, in 1943, by being employed on larger and more efficient farms, where they really will contribute something to the market." (U. S. Senate Committee on Military Affairs, Subcommittee on Technological Mobilization, *Hearings on Technological Mobilization*, Volume 3, U. S. Government Printing Office, 1943, p. 715.)

<sup>24</sup> *Ibid.*, p. 727.

<sup>25</sup> Based on unpublished reports from FSA Farm Labor Centers in 17 states during the period April 1942-May 1943. (Labor Division, Farm Security Administration, September 1943.) Even as late as February and March 1945, a study of farm labor in the citrus and vegetable growing areas of Texas revealed that agricultural workers housed in the Labor Supply Centers found employment for an average of only 3.7 days per week. (*Farm Labor*, April 1945, p. 5.)



In order to maximize the output of needed nutrients, the primary emphasis in production should have been on crops rather than on livestock products, on milk rather than on meats, on food crops rather than feeds, and, in general, on essentials rather than on the relatively less essential. There was little evidence of such reprofiling, however, in the application of available labor resources.

Between 1940 and 1945, the estimated man-hour requirements of meat animals and animal products rose by 7 percent, while the labor required for total crop production decreased by 4 percent. Among livestock enterprises, the man-hour requirements of milk production grew by merely one percent, while the total for other cattle, hog and sheep enterprises expanded by 8 percent and that of poultry production increased by more than one-fourth. Among the major categories of crop production, adjustments were more nearly in accord with desired directions of change, although their scale was wholly inadequate. Thus, average labor requirements remained at virtually their 1940 levels during 1940-43 both for feed crops and for food crops, and even during the next two years the decline in the requirements of feed crops was limited to 3 percent while the gain in the labor needed for producing food crops came to less than 5 percent. There was also a gratifyingly sharp decline in the labor requirements of cotton and tobacco, but only in alternate years; with the result that even as late as 1944 such requirements were only 2 percent smaller than in 1940.

War pressures effected comparatively little fundamental change in the broad pattern of manpower allocations among agricultural production enterprises. According to data presented in Table 24, a comparison of man-hour requirements in 1945 with those prevailing 5 years earlier reveals only such minor shifts as the decrease in the proportion of the total accounted for by crop production from 50.9 percent to 49.2 percent and the increase in the share required by meat animals and animal products from 29.4 percent of the total to 31.7 percent. Such stability was also apparent within these major categories. Requirements for milk production represented 17.0 percent of the national total for livestock and crop products in 1940 and 17.3 percent of the corresponding total in the last year of the war. Within the realm of crop production, labor requirements were distributed as follows among its major components in 1940 and in 1945: corn, other feed grains and hay 19.6 percent and 18.8 percent; all food crops 14.0 percent and 14.7 percent; cotton and tobacco 15.1 percent and 13.1 percent (14.5 percent in 1944). Thus, although the heavy pre-war emphasis on production for the feeding of livestock rather than for direct human consumption and on the production of cotton and tobacco

TABLE 24  
ESTIMATED LABOR REQUIREMENTS FOR ALL FARM WORK, 1940-45 <sup>1</sup>  
Millions of Man-hours

Categories of Production	1940	1941	1942	1943	1944	1945 <sup>2</sup>
Horses and mules .....	976	956	930	911	878	840
All meat animals and animal products <sup>3</sup>	6,027	6,147	6,346	6,495	6,399	6,455
Milk cows .....	3,471	3,488	3,494	3,473	3,465	3,508
Other cattle, hogs, sheep and wool ..	1,425	1,476	1,585	1,683	1,573	1,537
Poultry <sup>4</sup> .....	1,002	1,054	1,138	1,210	1,232	1,281
Total crops .....	10,419	10,077	10,602	10,254	10,574	10,009
Corn, other feed grains and hay ....	4,026	3,941	4,062	4,018	3,980	3,835
All food crops <sup>5</sup> .....	2,864	2,964	2,939	2,810	3,018	2,988
Cotton and tobacco .....	3,091	2,751	3,039	2,839	3,020	2,659
Oil crops and other crops .....	438	421	562	587	529	527
Farm maintenance <sup>6</sup> .....	3,053	3,053	3,053	3,053	3,053	3,053
All farm work .....	20,475	20,233	20,931	20,713	20,877	20,357

<sup>1</sup> Man-hours are in terms of the time required by average adult males to perform various farm tasks. Since many women, children and older workers accomplish less in an hour than an average adult male, actual hours of work on many enterprises are in excess of those shown.

<sup>2</sup> Preliminary.

<sup>3</sup> Includes, in addition to the productive livestock listed below, the labor required for minor livestock enterprises, such as goats, bees, ducks and geese.

<sup>4</sup> Includes labor required for chickens raised, hens and pullets for egg production, broilers and turkeys.

<sup>5</sup> Includes wheat, other food grains, sugar crops, truck crops, vegetables other than truck, and fruits and nuts.

<sup>6</sup> Includes labor required for fencing, repairs to buildings, machinery and equipment, farm woods, pastures, general land maintenance, farm business, and other miscellaneous work. The time required increased for some of these items during the war and decreased for others, but it is estimated that the total remained about the same. Additional work on permanent improvements was probably needed but was postponed because of the scarcity of labor and material.

Source: *Agricultural Statistics—1946*, p. 536.

were inadvisable from the standpoint of expanding the output of needed foodstuffs to the utmost during the war, it will be seen that the labor requirements of meat animal, animal products and feed output actually increased by 137 million man-hours between 1940 and 1945 compared with a rise of 124 million man-hours in the requirements for all food crops and also that even cotton and tobacco required more labor than all food crops up through 1944. Whatever the problems of readjusting such labor allocations may have been, it is surely provocative of serious concern that progress in the redistribution of this vital and severely limited resource assumed no more significant proportions.

#### 4. EFFICIENCY OF WORK METHODS

A third inadequacy in the utilization of farm labor stemmed from the relative inefficiency and technological backwardness of the work methods

customarily used by farm hands and by the operators themselves. Although the techniques of scientific motion study had long ago found broad and profitable applications throughout manufacturing industries and in a wide variety of other occupations ranging from operating-room procedures in hospitals to the firing of naval guns, they remained almost wholly insulated from the vast opportunities available in agriculture. Perhaps the two factors most responsible for this costly lag had been the long-standing over-supply of farm labor during peacetime, tending to eliminate the urgent incentives that either a shortage of manpower or higher wage levels might have provided, and the relatively small scale on which almost all farms have operated.

With the nation as a whole having a vital stake in securing the expansion of food production and in minimizing agriculture's demands on a straitened labor supply, the war created ample justification for jumping ahead the development and dissemination of improved methods of shucking corn, picking cotton, topping beets, crating fruits and vegetables, performing dairy barn chores, tending livestock, etc. The heavy proportion of hand work in farm tasks promised quick, spectacular results. For instance, an economist from the Department of Agriculture, with no previous farm experience in the South, developed some simple improvements in cotton picking methods after a few days of study which were reported to have increased the productivity of long experienced pickers by 30-35 percent at once.<sup>26</sup> At a special hearing on the problem conducted in December 1942 by the Senate Sub-Committee on Technological Mobilization, it was the consensus of expert technical opinion that even a modest undertaking in this field by the Federal Government, working closely with the Extension Service and the State Experiment Stations, and utilizing the principles and experience already accumulated in industry, would yield a manpower saving within 6-9 months estimated to equal the annual work time of one million farm laborers.<sup>27</sup> But this channel of manpower economy, too, continued to be practically unutilized.

Although the manpower crisis in agriculture took the form of a shortage of farm labor in a number of important areas, the foregoing data indicate that it was in reality a crisis in the organization, in the distribution and in the methods of utilization of agricultural manpower. Spot surveys showed large surpluses of farm labor pocketed throughout the

<sup>26</sup> *Senate Hearings on Technological Mobilization*, Volume 3, pp. 750-7, especially, p. 755.

<sup>27</sup> *Ibid.*, pp. 772-3.

South from Eastern Kentucky to Louisiana and to Oklahoma, aggregating hundreds of thousands. Additional millions were under-employed or were wasting much of their needed work capacity either in the production of inessentials or through continued reliance on inefficient work methods. It is of considerable import, therefore, from the standpoint of evaluating mobilization progress, that wartime achievements in curtailing these avoidable losses were of comparatively minor proportions. The hesitant, short-lived efforts to shift productive resources from the less essential and less efficient crops to those which were more necessary and more fruitful were reviewed in the preceding chapters. The failure to move the large surplus of agricultural manpower from the South to the regions more urgently in need of help is attested by the fact that the South Atlantic, East South Central and West South Central regions together accounted for 52.4 percent of the nation's farm employment in 1941, for 52.3 percent in 1943 and for 51.6 percent in 1945.<sup>28</sup>

One responsible farm manpower analyst estimated in 1943 that agriculture could spare about 1.5 million additional men, or 15 percent of its current labor force, to jobs elsewhere in the war economy, if the workers who were then employed least productively were drained off and if the remaining workers were used more efficiently.<sup>29</sup> This estimate, however, enormous as it was, did not take into consideration either the savings which could be effected through the elimination of inessential crops or the gains that could be harvested from the widespread application of work economy methods to handwork on farms. Considered in relation to the manpower shortages which were already plaguing airplane plants and shipyards, and in relation to the need which was growing to extend Selective Service to occupationally deferred war workers, these extra manpower resources in agriculture loomed great in their direct impact on major war policies. Nevertheless, the basic patterns of under-utilization of agricultural manpower continued to prevail throughout the war emergency.

<sup>28</sup> The percentage distribution of national farm employment by major geographical regions in 1941 and in 1945, respectively, follows: New England—2.4, 2.4; Middle Atlantic—6.0, 6.2; East North Central—13.7, 13.9; West North Central—15.9, 15.7; South Atlantic—18.7, 18.8; East South Central—16.3, 15.8; West South Central—17.4, 17.0; Mountain—4.2, 4.3; Pacific—5.4, 5.9. (*Agricultural Statistics—1945*, p. 415; *Farm Labor Report*, January 1943, p. 12; *Farm Labor*, February, April, June, August, October, and December, 1945.)

<sup>29</sup> Rainer Schickele, *Manpower in Agriculture*, Iowa State College, 1943, p. 14. This estimate was supported by the analysis presented by Col. Lewis Sanders, Selective Service System, in *Senate Investigation of Manpower Hearings*, Part 2, p. 338.

### 5. FARM LABOR MOBILIZATION MEASURES

Relatively little of the action taken during 1942 and 1943, or even during the remainder of the war, to cope with the manpower problems in agriculture was directed toward the ends which the foregoing facts indicated as most urgent.

Instead of freeing surplus labor from agriculture to ease the strains in war industry, the outflow was impeded and some additional manpower was actually brought in even when such action worked hardships on the Army as well as on war industries. Instead of redistributing manpower within agriculture to accord with the relative essentiality of crops and with the efficiency of alternate employments in utilizing labor fully, the dominant effort was to freeze labor into the haphazard pattern of inefficient and unconverted activities which still prevailed.

#### *To Minimize Withdrawals from the Farm Labor Force*

Out-migration from agriculture was prevented from assuming greater proportions by two forms of Selective Service action: the preferential deferment of farm workers from military service and the exercise of "farm or fight" coercions to secure the return of many who had left for urban employment.

Even prior to legislative efforts in this direction, the Selective Service System had responded to pressure from farm spokesmen by repeatedly advising local draft boards to give special consideration to the deferment claims of agricultural registrants. In October 1942, the War Manpower Commission went further by promulgating its Directive XIV, which further liberalized deferments for those engaged in dairy, livestock and poultry production.<sup>30</sup> Shortly thereafter came formal Congressional action.

The Tydings Amendment to the Selective Service Act, passed on November 13, 1942, provided for the deferment of all registrants found to be "necessary to and regularly engaged in an agricultural endeavor essential to the war effort . . . until such time as a satisfactory replacement can be obtained."<sup>31</sup> To meet these requirements, it was determined by the Selective Service System that a farmer had to be producing 16 "war units," a task representing full-time farm work for an able-bodied man during the year and involving consideration of the essentiality of

<sup>30</sup> Selective Service System, *Local Board Release No. 157*, Subject: Classification of Dairy, Livestock and Poultry Farm Workers and Operators, October 28, 1942.

<sup>31</sup> Selective Service System, *Local Board Release No. 164*, Subject: Classification of Registrants in Agriculture, November 30, 1942.

his crops as well as of their labor requirements.<sup>32</sup> Although the primary effect of this Act was to extend a preferment to agriculture over the rest of the economy for which there was no convincing justification, it also introduced the first constructive standards for measuring and guiding the conversion of agriculture that had yet found their way into legislation—fullness of manpower utilization and essentiality of crops. The “war units” criteria might have given great impetus to farm mobilization by at least defining in unmistakable terms the government’s conception of a minimum war job; but, unfortunately, the work requirement was soon reduced to 12 points and then down to 8 points in January, and, at the same time, the list of “essential” crops was steadily expanded until even short-staple cotton and tobacco had been added.<sup>33</sup>

In testifying before a Senate committee on February 3, 1943, Major General Lewis B. Hershey, Director of Selective Service, estimated that the Tydings Amendment had changed the draft classification of more than 200,000 farm registrants and that the number to be classified into II C (deferment for farm work) and III C (farm deferment combined with dependency) would total approximately 3 million by the end of 1943.<sup>34</sup> Since there were only 3.5 million men between the ages of 18 and 38 engaged in farm work, this meant an anticipated deferment ratio of more than 85 percent.<sup>35</sup>

As the demands of the armed forces continued to thin out eligible labor, the local draft boards were finally instructed on March 7, 1943, to defer qualified farm workers even if the assigned county recruiting quotas were thereby left unfulfilled. The unremitting pressure for still more far-reaching concessions to agricultural manpower was made evident by the Senate’s passage in mid-March of a bill introduced by Senator Bankhead (78th Congress, S. 729) and criticized by General Hershey and the War Department as far more lax than even the Tydings Amendment. As analyzed by the War Manpower Commission, the Bankhead Amendment to the Selective Service Act would have required the deferment of agricul-

32 *Memorandum on Manpower in Agriculture for 1943*, p. 10.

33 Application of the war unit system highlighted regional differences in productivity. In the South, 8 units were considered enough for deferment, while in Iowa 24 were required, in Illinois 20 and in parts of Wyoming as high as 30. (*Business Week*, April 8, 1944, p. 16.)

34 *Senate Investigation of Manpower Hearings*, Part I, p. 104.

35 The Bureau of Agricultural Economics estimate was somewhat lower, being placed at 72.6 percent of those engaged in farm work, assuming that local boards would interpret the provisions of the Tydings Amendment “liberally”. (*Memorandum on Manpower in Agriculture for 1943*, p. 17.)

tural registrants regardless of whether qualified replacements were eligible, regardless of whether the registrants were really needed where they were employed, and regardless of the essentiality of the crops which they were producing.<sup>36</sup>

As a result of these measures and of the strong pressures reflected by them, inductions of male farm workers into the armed forces declined to 250,000 during 1943, or to less than one-half of the preceding year's total.<sup>37</sup> Moreover, by the end of 1943, deferments from military service had been accorded to more than 1,600,000 farm workers between the ages of 18 and 37 inclusive, either on occupational grounds alone or on such grounds combined with dependency.<sup>38</sup> Accordingly, the manpower requirements of the armed forces could be met in each state only by requiring the urban population to contribute a disproportionately heavier share of its registrants for military service<sup>39</sup> and thereby increasing the necessity for drafting men out of the more essential industrial employments. These latter exactions, in turn, generated such serious production difficulties that the head of Selective Service, General Hershey, found it necessary in the mid-summer of 1943 to order the temporary cessation of inductions from West Coast aircraft plants.<sup>40</sup> So long as agriculture's manpower reserves remained under the double protection of the Tydings Amendment and of an officially authorized liberality in interpreting its standards of essentiality, however, and so long as military requirements necessitated a continuing inflow of new recruits, it was apparent that an increasing array of war industries would be compelled to assume the burdens of manpower shortages, and that temporary exemptions of one industry or another offered no constructive solution.

The extraordinary safeguards against further inductions from the farm labor force continued until the end of the war, surviving the stream of heated protests voiced by industrial employers and even the final manpower crisis precipitated by the Battle of the Bulge. Deferments for agricultural reasons at the beginning of 1945 were reported by Selective

36 Statement of Paul V. McNutt, Chairman of the War Manpower Commission, March 25, 1943.

37 Statement by War Food Administrator Marvin Jones in *House Hearings on Agriculture Department Appropriation Bill, 1945*, p. 754.

38 *Ibid.*

39 An unpublished analysis by the War Manpower Commission of actual withdrawal rates in each state and of rural contributions to them showed that by June 1943 urban groups were contributing more than twice their per capita share of inductees in 29 states.

40 *Washington Post*, August 5, 1943.

Service as still totalling 1,604,000, including 341,953 men under 26 years of age.<sup>41</sup> Hence, when the unexpected setbacks on the Western Front toward the close of 1944 led the War Department to press for heavier inductions, renewed demands were made for the tapping of agriculture's pool of young men. Executive agencies were reported to be planning to help meet the induction quota of 900,000 men for the first half of 1945 by drawing on agriculture's reserve through an administrative modification of standards of essentiality.<sup>42</sup> Toward this end, the Director of War Mobilization, James F. Byrnes, sent a letter to the National Director of the Selective Service System early in January, which was made public, advising that President Roosevelt had found, "that the further deferment of all men now deferred in the 18 through 25 age group because of agricultural occupation is not as essential to the best interests of our war effort as is the urgent and more essential need of the Army and Navy for young men. The President feels in view of existing conditions, agriculture, like our other war industries, can, with few exceptions, be carried on by those in the older age groups."<sup>43</sup> Continuing Congressional opposition to the tightening of agricultural deferment standards,<sup>44</sup> combined with the undiminished reluctance of local draft boards to release any additional significant number of farm workers offered an immediate challenge to this proposal; and although such resistance might have subsided in time, especially if military reverses had been intensified, it did succeed in delaying the effective implementation of this belated effort to curtail agriculture's manpower priorities until the collapse of the German army terminated the undertaking.

The preferred deferment status of farm workers not only minimized losses of manpower to the armed forces but also tended to discourage transfers to non-agricultural employment by emphasizing the greater risks of induction attendant even on work in war plants. A still more effective barrier was thrown in the way of such migration, however, with the issuance of War Manpower Commission Regulation No. 7 in the fall of 1943. Under this directive, no person who had been regularly engaged in agriculture could transfer to non-farm employment unless he could

41 *House Hearings on Agriculture Department Appropriation Bill, 1946*, Part 1, p. 31.

42 *Business Week*, January 6, 1945, p. 5.

43 George W. Hill, "Farm Labor: Problems and Programs", *The Agricultural Situation*, February 1945, p. 14.

44 For example, the House Military Affairs Committee countered by amending the Bailey-May Bill to reaffirm the statutory exemption of farm workers from the draft. (*Business Week*, January 27, 1945, p. 5.)



secure an official referral from the U. S. Employment Service to a specific job which would demonstrably aid in the effective prosecution of the war. Moreover, before referring a farm worker to employment outside of agriculture, the local office of the U. S. Employment Service was required to consult with the county agricultural extension agent. Regulation No. 7 did permit non-farm employment for a period not to exceed six weeks without referral by the U. S. Employment Service but only in the locality where the worker had lived or been employed during the preceding 30 days, and, in the case of those with a deferred status, only after securing a release from their local draft boards for the proposed period.<sup>45</sup> Tight as these restrictions were, they were not relaxed until the end of the war was in sight, and even then only in areas in which there was recognizedly no acute manpower problem.<sup>46</sup>

*To Maximize Additions to the Farm Labor Force*

Efforts to curtail the outflow of manpower from agriculture were supplemented by a number of measures designed to stimulate an inflow. One of the tools employed in the latter undertaking was a Selective Service System ruling which was introduced during the spring of 1943, in the midst of frenzied agitation about general farm labor shortages which was later proved to have been without much foundation. As drafted, the original order permitted local Selective Service boards to make available to the county agricultural boards the names of all men with dairy farm experience who had been rejected as physically unfit for military service or who, though registered, were over 38 years of age. In turn, the agricultural board was empowered to write to all of these who were no longer employed in agriculture and who were not in essential occupations demanding that they return to dairy farm work within 30 days or face being recommended for immediate military inductions, with physical and age disqualifications waived.<sup>47</sup> In time, the net came to be cast even wider, and despite the fact that employment in essential occupations was clearly supposed to secure exemption from such coercions, there were widespread reports of many persons working in essential industries receiving letters of this kind and being sufficiently intimidated to give up what they were doing. Perhaps still more extreme, complaints were placed before Con-

<sup>45</sup> *Food Program for 1944*, pp. 51-52.

<sup>46</sup> *Final Report of the War Food Administrator*, p. 29.

<sup>47</sup> It was reported to the Senate Sub-Committee on War Mobilization that during the summer of 1943, the War Manpower Commission had received a large number of complaints to this effect from industrial employers who were losing key workers.

gress that some county officials even used these threats against tenant farmers in an effort to secure additional harvest labor.<sup>48</sup>

Promises of draft deferment, together with threats of immediate induction against recalcitrant ex-farm workers, apparently induced a substantial flow of manpower back to farming. The Census Bureau reported that even during the first quarter of 1943, before the power to trace down "refugees" from farm work and to threaten their induction had been granted to the county agricultural boards, the number of men shifting to agriculture from other occupations was 110,000 more than the usual level for that time of year.<sup>49</sup> Later in the Spring, the Under-Secretary of War, Robert P. Patterson, warned the House Military Affairs Committee that this movement had reached national proportions and that it was hampering critical war industries. The mining and logging industries, for example, were so crippled by the flight of skilled workers in some areas that shortages of materials needed for the immediate use of the armed forces developed.<sup>50</sup> Nonetheless, this flow back continued to grow still heavier and promised to gain added momentum with the extension of the draft to fathers and with the progressive tightening of occupational deferments in industry. In consequence of such civilian transfers to agriculture and the return of an estimated 100,000 men from the armed forces in 1943 and again in 1944,<sup>51</sup> total arrivals from non-farm areas during 1943 and 1944 averaged one million persons yearly or nearly 30 percent above the annual average for the preceding three years.<sup>52</sup>

Other programs seeking further to swell the volume of manpower available to agriculture included the importation of labor from abroad, the utilization of conscientious objectors and Japanese internees, the allocation of prisoners of war and inmates of corrective and penal institutions, the recruitment of civilian volunteers and even the diversion of soldiers on active duty.

48 U. S. Senate, Committee on Appropriations, *Hearings on the Farm Labor Program, 1943*, U. S. Government Printing Office, 1943, pp. 228, 230, 248.

49 Bureau of Agricultural Economics, *Shifts of Males of Military Age to Agricultural Work during the First Quarter of 1943 and 1942*, mimeographed, July 5, 1943.

50 The War Manpower Commission estimated that about 17,000 men were leaving non-agricultural employment each month in favor of draft-deferred farm jobs. The biggest transfers were from West Coast plane factories, non-ferrous mining and lumbering. Many of those shifting were apparently urban workers who had never worked on farms but who preferred overalls to a uniform. (*Business Week*, June 19, 1943, pp. 7, 20.)

51 *Agricultural Statistics—1945*, p. 412.

52 *Ibid.*

The importation of foreign workers for agricultural purposes was initiated in 1942 under a series of intergovernmental agreements and rose steadily until the end of the war.<sup>53</sup> Arrivals in 1943 exceeded 65,000, including 52,908 Mexicans, 8,928 Jamaicans and 4,698 Bahamans.<sup>54</sup> During the following year, such employment reached a peak of 94,649, composed of 67,860 Mexicans, 17,437 Jamaicans, 5,653 Bahamans and 2,209 arrivals from Newfoundland and Barbados. A slight additional gain was recorded in 1945, with increases in the Jamaican and Bahaman contingents offsetting reductions in the other categories to raise total employment of imported farm labor to 95,137 on June 30.<sup>55</sup>

In terms of numbers at least, prisoners of war provided even heavier additions to the agricultural labor force. Although the utilization of such resources was hardly even in the planning stage during the early part of 1943,<sup>56</sup> 45,400 prisoners of war were so employed before the end of that year,<sup>57</sup> with the total rising to 100,000 in 1944<sup>58</sup> and to 115,369 in November 1945.<sup>59</sup> The resultant volume of work performed, however, probably fell substantially short of that contributed by imported workers. One carefully prepared, but unpublished, report made available to the Senate Sub-committee on War Mobilization suggested that in some areas the use of war prisoners may have had more effect in moderating the wage

53 For text of agreement with the Mexican government, see *House Hearings on Agriculture Department Appropriation Bill, 1944*, pp. 999-1001. For text of agreement covering the importation of Bahaman labor, see *Senate Hearings on the Farm Labor Program, 1943*, pp. 211-220.

54 Statement by War Food Administrator Marvin Jones, *House Hearings on Agriculture Department Appropriation Bill, 1945*, p. 754.

55 *Final Report of the War Food Administrator, 1945*, p. 30.

56 "There is another thing that may come into the picture that in some areas may be helpful, and that is the use of prisoners of war, if they are brought into this country. The Army has built about 60 camps and they have agreed to accept 175,000 prisoners. Some of these camps are located in areas where they can be effectively used in agriculture. . . . I talked to General B. M. Bryan who apparently has that in charge, and took him a map showing the location of heavy crop producing areas and also the location of many of these processing plants that we are going to do the dehydration of foods in, and he told me he would bear those areas in mind and give them consideration in the allocation of new camps." (Testimony of Major John C. Walker, Chief of the Agricultural Labor Branch of the Food Production Administration, *Senate Investigation of Manpower Hearings*, Part I, pp. 76-77.)

57 Statement of War Food Administrator Marvin Jones, *House Hearings on Agriculture Department Appropriation Bill, 1945*, p. 754.

58 Statement of War Food Administrator Marvin Jones, *House Hearings on Agriculture Department Appropriation Bill, 1946*, Part 2, p. 7.

59 *Farm Labor*, November 13, 1945, p. 16.

demands of competing free labor than in saving crops that would otherwise have been lost.<sup>60</sup> According to this survey, the few actual records available indicated that in the harvesting of peanuts, for example, the average output per day of prisoners was well under one-fourth that of local labor engaged in the same work. Although the cost per stack was therefore higher for the prisoners, general knowledge of their 80 cents per day wage<sup>61</sup> was commonly mentioned as having had a "good" effect on Negro laborers, making them work harder, lower their wage demands and "act less independent." In this connection, it may be of interest to note that a sample survey of citrus picking in selected areas of Florida during February 1945 found that prisoners of war produced about one-half as much as domestic workers or imported foreign labor.<sup>62</sup>

The thoroughness of endeavors to augment the farm labor force is suggested by the fact that nearly 20,000 more workers were added from Japanese relocation camps, from the public service camps to which conscientious objectors were assigned, and from corrective and penal institutions.<sup>63</sup> The latter alone supplied 4,400 in 1943 and almost an equal number in the following year. Conscientious objectors engaged in farm work rose from 2,500 in 1943 to 3,900 the next year. Japanese internees who volunteered<sup>64</sup> for such employment numbered 8,750 in 1944 and 12,600 in the preceding year.

As always, however, the greatest addition to the agricultural manpower represented by farm operators, their families and year-round hired labor was that contributed by seasonal workers. Although the wartime recruitment of such labor went forward under somewhat altered auspices and under more distinctive trappings, there was little change in the scale of requirements and little evidence of any substantial improvement in the effectiveness with which such workers were utilized. Primary responsi-

60 The report had been prepared by farm labor specialists on the field staff of the Farm Security Administration during the early part of 1944.

61 Employers actually paid for work done by prisoners at prevailing piece rates in the area, but all earnings in excess of 80 cents per day per prisoner were appropriated by the U. S. government.

62 *Farm Labor*, March 13, 1945, pp. 8-9.

63 1943 and 1944 data from statements by War Food Administrator Marvin Jones, *House Hearings on Agriculture Department Appropriation Bill, 1945*, p. 754 and *House Hearings on Agriculture Department Appropriation Bill, 1946*, Part 2, p. 7.

64 The voluntary basis of this program was established at the very outset and maintained throughout the war. For a statement of early plans in this area, see testimony by Wayne A. Darrow, Director of the Agricultural Labor Administration, U. S. Senate, Committee on Appropriations, *Hearings on Farm Labor Program, 1943*, U. S. Government Printing Office, 1943, p. 46.

bility for the mobilization and placement of seasonal labor was shifted from the U. S. Employment Service to the Extension Service of the Department of Agriculture by Congressional enactment in April 1943, but the latter continued to lean heavily on the former's facilities, while also supplementing them with its own system of county agents and a network of advisory committees and local leaders.<sup>65</sup> Perhaps the major change effected in the recruiting process was the heavy flavoring of employment appeals with patriotic and quasi-military symbols. Thus the drive for local men, women and young boys and girls to help with the usual round of temporary and prosaic farm work was reformulated into a call for service with the organizationally tenuous U. S. Crop Corps, with its affiliated Women's Land Army and Victory Farm Volunteers, or with the High School Victory Corps sponsored by the U. S. Office of Education.<sup>66</sup> While such incentives were probably helpful in the tightened labor markets, it should be noted that the sudden issuance of appeals for millions to join these newly-formed organizations<sup>67</sup> added somewhat to the confusion about agricultural manpower shortages by implying that these were created to cope with wartime increments in farm labor requirements. At any rate, although the annual gain in farm employment between the January 1 level and the year's peak averaged a slight decline between the early period of the war and 1944, and declined more sharply in 1945, the seasonal addition to the farm labor force exceeded 3 millions even in the latter year.<sup>68</sup>

Despite the heavy contributions of manpower produced by the programs which have been mentioned, the pressure for the increased diversion of military personnel to supplement the agricultural labor force con-

<sup>65</sup> *Food Program for 1944*, p. 52.

<sup>66</sup> *Ibid.* Another effort to attract young workers through quasi-military recognition was embodied in the bill introduced by Senator Millard E. Tydings of Maryland to establish a Junior Army of the United States which would serve under the Secretary of Agriculture to help expand available farm labor supplies. (*S. 880, 78th Congress, 1st Session*) For a discussion of this bill and a comparison of its provisions with the plans of the Extension Service for "Victory Farm Volunteers", see *Senate Hearings on Farm Labor Program, 1943*, pp. 25-33.

<sup>67</sup> The goal for 1943 was set at 3.5 millions (U. S. Department of Agriculture, *U.S.D.A.*, May 15, 1943, p. 4) and was actually surpassed. During the succeeding two years, however, the results fell short not only of the goal of 4 million which was set for 1944 (*Food Program for 1944*, p. 53) and again for 1945 ("Farm Labor: Problems and Programs", *op. cit.*, p. 16), but even of the number recruited in 1943.

<sup>68</sup> The wartime gain in farm employment between each year's low point and its peak varied as follows (in millions): 1940—3.8, 1941—3.6, 1942—3.7, 1943—3.8, 1944—3.6, 1945—3.1. (Based on Table 22.)

tinued to mount toward the end of 1942 and during the early part of 1943. Proposals varied from adoption of a system of 30-day furloughs to the preferential release of enlisted men with farm experience under safeguards ensuring their remaining on farms for the duration.<sup>69</sup> In an effort to moderate such demands, the Deputy Chief of Staff, Lt. Gen. Joseph T. McNarney, finally expressed the willingness of the Army to provide troops to aid in harvesting crops when conditions warranted such action.<sup>70</sup> Nevertheless, a number of bills were introduced by Congressmen to require the furloughing or actual discharge of soldiers with farming experience.<sup>71</sup> Indeed, it was the judgment of responsible observers that only the most intensive efforts by the military services and by the White House, combined with far-reaching assurances to make troops available to agriculture on a more liberal basis than had been contemplated in the Army's original counter-proposal,<sup>72</sup> prevented the enactment of such legislation. By the end of 1943, 61,925 soldiers had been made available for farm work, 54,200 having volunteered as individuals and the remainder having been assigned in military units.<sup>73</sup> The rising tempo of combat requirements reduced the volume of such aid during 1944 to 28,500 troops, all volunteers.<sup>74</sup>

All of these resources taken together, with the exception of soldiers on active duty, represented significant and welcome additions to the nation's scarce manpower supplies. With under-employment already ram-

<sup>69</sup> *Senate Investigation of Manpower Hearings*, Part 1, pp. 156-158.

<sup>70</sup> *Ibid.* In a later appearance before a Senatorial committee, General McNarney emphasized that the Army's program had been presented to the President on November 28, 1942, although it had not been presented to Congress or otherwise publicized prior to the February 1943 hearing referred to in the preceding footnote. (Senate Committee on Agriculture and Forestry, *Hearings on the Food Supply of the U. S.*, Part 1, U. S. Government Printing Office, 1943, pp. 266-7.)

<sup>71</sup> For example, see H. R. 1728 and H. R. 2233 introduced into the 78th Congress by Representatives Hampton P. Fulmer of South Carolina and Lowell Stockman of Oregon, respectively.

<sup>72</sup> The original program presented by General McNarney emphasized that soldiers would be made available only for harvesting, only for gathering essential crops, only if such crops would otherwise be lost and only if soldiers were assigned in military units rather than as individual volunteers. All of these conditions were substantially modified in the course of negotiations and later application of resulting policies. Thus, although the proposal to the President denounced the furloughing of individual soldiers for farm work and stressed the importance of providing such aid only through the assignment of established combat and service army units under their regular officers, the actual aid provided during 1943 was composed overwhelmingly of individual volunteers.

<sup>73</sup> *House Hearings on Agriculture Department Appropriation Bill*, 1945, p. 754.

<sup>74</sup> *House Hearings on Agriculture Department Appropriation Bill*, 1946, Part 2, p. 7.

pant in certain parts of agriculture, however, it is apparent that the pouring of additional manpower into deficit areas would have been justified from the standpoint of mobilization only if at least equivalent quantities of labor had been simultaneously withdrawn from agriculture's more liberally supplied areas in order to help ease pressing manpower shortages in other sectors of the national war effort.<sup>75</sup> As it happened, the Federal government experienced extreme difficulty in seeking to fulfill the agreement ensuring at least 75 percent of full-time employment to the Bahamians and Jamaicans brought into this country<sup>76</sup>—widespread allegations of farm labor shortages notwithstanding. Eventually, many had to be given jobs for which American workers were already available, while others had to be placed in railroad and other non-agricultural employments in disregard of the fact that they had been imported for the specific purpose of aiding farmers.<sup>77</sup> Also of interest in this connection was the finding that despite the intensified efforts to recruit young boys and girls for seasonal agricultural work which was discussed earlier, "The [Children's] Bureau obtained evidence from many sections of the country that, contrary to expectations and except in certain crops and at certain times, there was less need for youngsters as agricultural workers (in 1943) than in 1942."<sup>78</sup> One can sympathize with the viewpoint expressed by War Food Administrator Marvin Jones before a Congressional committee during a review of the farm labor program, and assuredly felt by many another war program official harassed by continuous resources stringencies, that, "I would much rather have a little extra help already available"<sup>79</sup> than risk possible shortages. Within the framework of a national

75 "But our manpower shortage is such that it would be foolish to ensure farmers all the labor they want when so much is urgently needed in war plants and the armed forces." (Statement by Dr. Joseph S. Davis, Director of the Food Research Institute at Stanford University, in his pamphlet, *Wartime Food Management*, issued on August 11, 1943, as Vol. I, No. 1 of the Los Angeles Chamber of Commerce's projected series under the imprint of the Economic Sentinel.)

76 "The workers shall be employed for at least 75% of the periods of employment (exclusive of Sunday or one other day in each seven) specified in their contracts with the U. S. Government. Each worker shall receive a subsistence allowance of \$3 for each day upon which he is not so employed within such 75%..." (From the text of the "Agreement for the employment of Bahamians in the U. S.", *Senate Hearings on the Farm Labor Program, 1943*, p. 213.)

77 Reported to the Senate Sub-Committee on War Mobilization by Dr. Howard R. Tolley, Chief of the Bureau of Agricultural Economics in *Senate Hearings on War Mobilization*, Part 2, galley, p. SO8.

78 Ione L. Clinton, "Boys and Girls Employed in Agricultural Programs—1943", *The Child*, February 1944, p. 115.

79 *House Hearings on Agriculture Department Appropriation Bill, 1945*, p. 763.

manpower shortage, however, policies directed to the realization of such margins could be pursued only at the immediate expense of other programs of equal or even greater strategic importance.

*Redistribution of Available Farm Manpower*

The serious internal weaknesses in the organization, distribution and utilization of the agricultural labor force were in no wise reduced and could not be concealed by the wasteful allocation of more and more manpower. Even a moderate redistribution of the manpower available to agriculture would have gone far toward ensuring that all essential farm labor needs would be met and that all farm workers could secure reasonably full employment, in addition to freeing substantial numbers for military service and industrial production. The Department of Agriculture had had simple, workable plans for moving toward these objectives since 1942.<sup>80</sup> But instead of acceding to such reasonable proposals, a few groups permitted a near-sighted, monopolizing concern with the protection of their customary labor surpluses to blur their awareness of urgent national needs and accordingly sought to deny aid to their fellow farmers by propagandizing Congress to freeze farm workers more securely than ever within their current areas of employment.

Shortages of gasoline, tires and automobile repair parts alone went far toward crippling the mobility of hundreds of thousands of farm workers upon whom the farmers in many specialized crop areas had come to depend. In addition, local statutes designed to minimize the hiring away of local labor for employment elsewhere—the so-called “emigrant agent” laws—were made more stringent and their enforcement became more

<sup>80</sup> As presented to the Sub-Committee of the Senate Appropriations Committee by Paul V. McNutt, Chairman of the War Manpower Commission, it provided for the determination of labor requirements and of available labor supplies for the mobilization of local volunteers, for the transportation of approximately 275,000 migratory farm workers, for the training of volunteers or farm workers to improve skills and efficiency, for the provision of necessary housing and medical facilities at points of temporary peak employment and for the development of an effective wage policy. The proposed budget for these activities came to \$65 million. (*Investigation of Manpower Hearings*, pp. 24-26, 329, 372-383.)

<sup>81</sup> One widely publicized example of how these laws, which are operative in eleven Southern states, obstructed the wartime requirement for full utilization of labor involved the arrest of Mr. Otis O. Nation, business agent of Local 4, CIO-Florida Citrus and Allied Workers Union in Orlando on August 4, 1943 for encouraging union members unable to find employment in Florida to go to New Jersey where an acute labor shortage was becoming worse daily. No factual evidence was adduced challenging the workers' alleged inability to find acceptable employment. Nor could the urgency of



strict.<sup>81</sup> Moreover, the enactment of Public Law 45 on April 29, 1943,<sup>82</sup> so narrowly circumscribed the possible role of the Federal Government in improving the utilization of farm labor as to minimize any possible threats to labor hoarding from Washington. The two key restrictive provisions of this Act were:

1. "Sec. 4(a) No part of the funds herein appropriated shall be expended for the transportation of any worker from the county where he resides or is working to a place of employment outside of such county without the prior consent in writing of the county extension agent of such county, if such worker has resided in such county for a period of one year or more immediately prior thereto and has been engaged in agricultural labor as his principal occupation during such period.
2. "Sec. 4(b) No part of the funds herein appropriated, or heretofore appropriated or made available to any department or agency of the Government for the recruiting, transportation, or placement of agricultural workers, shall be used directly or indirectly to fix, regulate, or impose minimum wages or housing standards, to regulate hours of work, or to impose or enforce collective-bargaining requirements or union membership, with respect to any agricultural labor, except with respect to workers imported into the United States from a foreign country and then only to the extent required to comply with agreements with the government of such foreign country."

This law prevented the Federal government from being in a position to assure those willing to consider the possibility of migration that acceptable working and living conditions would be provided, or even that their transportation expenses would be paid. Hence, natural inertias and uncertainties, together with the already mentioned Selective Service pressures, could safely be counted on to maintain the pockets of under-utilized labor which dotted the Southern and Appalachian regions. Although discussing only one of the groups affected, the following comment by Col. Jay L. Taylor, then head of the Department of Agriculture's farm labor activities, well summarized the general effect of this Bill on the redistribution of under-employed farm manpower: "... the county agent [has to] certify that the county has a surplus labor supply before we can move any labor out in using [available Federal funds]. If he says that there is a

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New Jersey requirements be questioned for only a few days later Governor Edison had to proclaim an emergency and solicit the aid of soldiers stationed at Fort Dix in order to prevent the waste of hundreds of thousands of bushels of tomatoes. Nevertheless, Mr. Nation was tried, and convicted on Oct. 18, for violating the strictures of Florida's "emigrant agent" laws. For background material on the "emigrant agent" laws, see Herbert Roback, "Legal Barriers to Interstate Migration", *Cornell Law Quarterly*, March and June, 1943.

82 *Public Law 45*, 78th Congress, Chapter 82, 1st Session, House Joint Resolution 96.

surplus of labor there and some farmer says there isn't, you can imagine the great fight we get into. So we are afraid that under this program the moving of marginal farmers is just about over."<sup>83</sup>

The effects of this legislation on the redistribution of the manpower available to agriculture may be appraised quantitatively by comparing the numbers transported under it either with the previously cited estimate by the Secretary of Agriculture that the under-employment of farm labor in 1942 represented a loss equal to about one-fifth of agriculture's total labor requirement,<sup>84</sup> or with the estimate of Paul V. McNutt, head of the War Manpower Commission, that, "more than 2 million farm operators have not been fully or effectively employed, in addition to large numbers of other persons who have been available for work as farm hands,"<sup>85</sup> or with the previously noted recommendation of the wartime farm labor program proposed by the Department of Agriculture that transportation be provided for 275,000 farm workers in 1943, the program's very first year.<sup>86</sup> Actually, only 20,000 were transported from one state to another during 1943, while an additional 27,000 were transported within their home states.<sup>87</sup> Moreover, even this meager total was reduced by half in 1944, as the numbers transported interstate declined to 11,322 and those moved intra-state decreased to 20,400.<sup>88</sup> For 1945, it was estimated that only about 10,000 farm workers would be granted interstate transportation assistance.<sup>89</sup>

In short, the farm labor situation during 1940-45 might be summarized as follows: While many small sectors of agriculture experienced recurrent shortages, the total manpower available to agriculture was reasonably estimated to exceed the needs of essential production by not

83 U. S. Department of Labor, Children's Bureau, *Proceedings of Meeting Held May 14-15, 1943 of the Sub-committee on Young Workers in Wartime Agriculture of the General Advisory Committee on Protection of Young Workers*, mimeographed, August 1943, p. 15.

84 See section two of this chapter.

85 House Committee on Agriculture, *Hearings on Farm Labor and Production*, Serial 1, U. S. Government Printing Office, 1942, p. 78.

86 Referred to at the outset of this sub-section on Redistribution of Farm Manpower.

87 *House Hearings on Agriculture Department Appropriation Bill, 1945*, p. 754.

88 The figure for intra-state transportation is from War Food Administrator Marvin Jones' statement in *House Hearings on Agriculture Department Appropriation Bill, 1946*, Part 2, p. 7. However, the figure of 7,800 for the number of domestic workers transported from one state to another was raised to 11,322 both in *The Agricultural Situation* for February 1945 ("Farm Labor: Problems and Programs", p. 16) and in Mr. Jones' *Final Report of the War Food Administrator, 1945*, p. 30.

89 *Final Report of the War Food Administrator, 1945*, p. 30.

less than 20 percent. Under-employment, the wasteful diversion of labor to inessential crops, and the continuance of backward work methods held the utilization of available labor to levels regrettably far below feasible potentials and thus but added to the serious manpower burdens being borne by the rest of the war economy. Significant progress toward the reduction of these wastes could have been achieved through the introduction of an effective program at least for the orderly redistribution and circulation of farm manpower in accordance with the relative essentiality of crops, the relative efficiency with which alternative employments utilize the labor made available to them, and the seasonal fluctuation of labor requirements. Here as in various other sectors of agricultural mobilization, however, the major patterns which prevailed during the early years of the war remained dominant until the end.

## CHAPTER VII

### FARM MACHINERY

THE inadequate expansion of wartime food production relative to total requirements was more frequently attributed to farm machinery shortages than to any other factor of production with the exception of alleged manpower deficits.<sup>1</sup> A careful examination of the relevant facts, however, suggests that in this instance, too, occasional, temporary and highly localized shortages had led through generous publicity to a widespread though essentially unfounded assumption of general shortages, and, in turn, to demands on the Federal government which could not but hinder the effective allocation of scarce productive resources.

There can be little doubt of the extraordinary importance of farm machinery in raising the productive efficiency and the potential net output of the nation's farm plant. Agricultural mechanization in the United States had advanced in three waves during the thirty years preceding the second world war.<sup>2</sup> Between 1914 and 1920, the period dominated by the earlier hostilities, the volume of farm implements plus tractors and engines sold annually was doubled, with the tractor category contributing the greater part of the increase. After a sharp decline in 1921, the total volume of farm machinery sold entered on a renewed cycle of increases to reach a peak in 1929 surpassing that of 1920. In consequence of these heavy additions, the stock of implements and machinery on farms had grown to almost twice its 1910 proportions by 1930.<sup>3</sup> Farm machinery sales plunged sharply downward again during the early thirties only to have the subsequent upturn carry them well beyond even the 1929 record in 1937. A brief recession began in 1938 but was arrested before long by war developments. In the course of this progressive shift from work animals to tractors for field motive power and to automobiles and motor trucks for transportation as well as of the adoption of more and more

1 For example, in a statement released February 19, 1943, Secretary of Agriculture Claude R. Wickard emphasized that, "Next to farm labor, the outlook for farm machinery presents the most serious obstacle to production that farmers face." Earlier, the Director of the Food Production Administration, M. Clifford Townsend, had expressed a similar opinion to the Senate Special Committee Investigating the National Defense Program, popularly termed the "Truman Committee." (U. S. Senate, Special Committee Investigating the National Defense Program, *Hearings*, Part 17, U. S. Government Printing Office, 1943, p. 6783.)

2 For the value of farm machinery sold annually during 1914-1938, in terms of 1910-14 prices, see John A. Hopkins, *Changing Technology and Employment in Agriculture*, U. S. Government Printing Office, 1941, p. 46.

3 *Ibid.*, p. 51.

machinery for soil tillage, planting, cultivation and harvesting, outstanding reductions were effected in the man-hours required per acre for the production of major crops, ranging up to more than 50 percent in the case of wheat,<sup>4</sup> and more than 50 million acres hitherto devoted to growing feed for horses and mules were made available for marketable products<sup>5</sup>—both of these representing categories of gain on which the exigencies of war economy placed the highest premiums.

Although it was the Secretary of Agriculture's own judgment that, "Farmers in this country entered the world conflict reasonably well provided with farm machinery," and that such equipment was "in good condition and for the most part of relatively recent models,"<sup>6</sup> it should be recognized that the potentials for further advancing the productive efficiency of agriculture through greater mechanization were still enormous and that farmers were not only eager but financially able to purchase large additional quantities of such productive tools. Even these significant considerations were insufficient in themselves, however, to justify the maintenance, much less the expansion, of farm machinery production in the midst of national mobilization, with its attendant severe shortages of raw materials, fabricating facilities and skilled manpower.

#### I. WARTIME CONTROL ISSUES

Government controls over the output of farm machinery and other industrial products were dictated by the need to allocate the inadequate productive resources which were available among a wide array of supply programs so as to ensure the maximum expansion of military strength without seriously weakening any essential components of the underlying civilian economy. The priority orders which were issued to guide the dis-

<sup>4</sup> For estimates of the reduction in man-hours required per acre to produce selected major crops between 1909-13 and 1934-36, see U. S. Department of Agriculture, *Technology on the Farm*, U. S. Government Printing Office, 1940, p. 63. Incidentally, this report also recalls, in appraising the impact of technological developments in agriculture, the finding of the National Resources Committee that, "In 1787, the year the Constitution was framed, the surplus food produced by 19 farmers went to feed one city person. In recent years 19 people on farms have produced enough food for 56 non-farm people, plus 10 living abroad." (*Ibid.*, p. 61.)

<sup>5</sup> Sherman E. Johnson, *Changes in Farming in War and Peace*, Bureau of Agricultural Economics, mimeographed, June 1946, p. 11. Also to be noted in this connection is that, "It is commonly held that a modern tractor replaces 5 work animals, which require feed from 20 acres of land and 250 more work hours in annual care than a tractor." (James A. McAleer, *Farm Machinery and Equipment Policies of the War Production Board and Predecessor Agencies*, Historical Reports on War Administration: War Production Board Special Study No. 13, mimeographed, November 10, 1944, p. 1.)

<sup>6</sup> *Report of the Secretary of Agriculture, 1942*, p. 39.

tribution of resources entailed production limits which invariably appeared overly repressive to the industries affected by them, but such orders were also of vital aid in the procurement of enough materials to produce even as much as was permitted. Indeed, so heavy were the inroads made by rapidly accelerating military supply programs on the materials and manufactured components required by farm machinery producers that they petitioned the government for priority assistance in mid-April 1941, some time before any governmental program for farm machinery had been formulated.<sup>7</sup>

General Metals Order No. 1, bringing 16 groups of metals under partial controls, was issued at the beginning of May 1941 by the Office of Price Administration and Civilian Supply. Its Civilian Maintenance and Repair Program, released two months later, included farm equipment among the 26 essential industries to which were assigned a general priority on materials and equipment to be used for maintenance and repair. The first priority program dealing solely with the farm machinery industry, and encompassing requirements for new production as well as for the maintenance of equipment in the field, was issued by OPACS on July 23, and was implemented by the issuance of a corresponding preference rating by the Office of Production Management on August 20. Formal programs for the industry were issued annually thereafter until the end of the war, with each of them being revised at least once.<sup>8</sup>

Wartime controls over the farm machinery industry embraced a variety of objectives but their central focus was to maximize the diversion of materials, manufacturing facilities and skilled labor from the production of farm machinery to more urgent supply programs, short of causing any reduction in agricultural output attributable to shortages of farm machinery. The means employed included materials conservation measures, inventory controls, attempts to promote the standardization of wartime models of such equipment, the establishment of rationing controls over distribution, and efforts to concentrate the allowable level of new production in the industry's smaller plants in order to permit the fullest possible conversion of the larger units which were better adapted to the volume production of military items. As might be expected, controversies developed among government agencies and between government officials and representatives of the industry about the desirability of these objectives as well as over the effectiveness of the procedures proposed for

<sup>7</sup> *Farm Machinery and Equipment Policies of the War Production Board and Predecessor Agencies*, p. 9.

<sup>8</sup> For a fuller description of these orders and a more detailed chronology of this early period, see *ibid.*, pp. 11-17.

implementing them. But the most bitterly contested issue, because it was patently the most important, concerned the level to which new production was limited. Except for the hurriedly prepared initial program which was applicable only to the last few months of 1941 and was withal a generous one, each year's determination of allowable new production came as the climax of a process in which factual analysis and constructive negotiations were frequently overshadowed by violent disagreements, political pressures and even personal recriminations.

The advocates of larger farm machinery output had repeated occasions to present their case to responsible official bodies, including the Department of Agriculture, the War Food Administration, the War Production Board and its predecessor agencies, and a variety of Congressional committees, as well as before non-governmental groups. A careful examination of such presentations indicates that proposals for expanding the manufacture of farm machinery rested primarily on the following premises:

1. that food production goals exceeded all previous records;
2. that the shortage of farm labor was growing steadily more acute;
3. that the uninterrupted decline in the number of horses and mules on farms was reducing the total motive power that farmers could apply to the drawbars of their equipment;
4. that heavier work demands combined with the increasing age of much farm machinery dictated a heavier rate of replacements.

Such serious and analytically formulated contentions were thoroughly within the spirit of assisting in the definition of an appropriate wartime policy on farm machinery and hence warrant thoughtful appraisal. It should be noted at the outset, however, that, even from the standpoint of agricultural mobilization alone, support of the request for increased farm machinery production required proof not only that inadequate supplies of this resource were significantly curtailing farm output, but also that increased production of new equipment represented the most effective remedy available. Moreover, increased materials allocations for farm machinery could only be justified from the broader standpoint of national mobilization by demonstrating an urgency and a potential contribution to the winning of the war greater than that of competing supply programs.<sup>9</sup>

<sup>9</sup> Those responsible for allocations on a national level were, of course, bombarded from all sides by persuasive appeals for greater allotments along with threats of a multitude of disasters if this or that request should be pruned or denied. The Chairman of the War Production Board, Donald M. Nelson, once tried to illustrate the fundamental problem as follows in speaking to a Congressional committee whose members were

In examining the adequacy of farm machinery supplies during the war, attention will be directed first to the considerations relating to the determination of wartime requirements, then to the levels of production authorized by government agencies, and finally to the actual relationship which emerged between farm machinery supplies and measures of the essential need for them.

## 2. WARTIME REQUIREMENTS CONSIDERATIONS

The first of the contentions noted above concerned the adequacy of current farm machinery production relative to prospective increases in agricultural output. Proponents of a higher rate of manufacture leaned heavily on this comparison. However, the use of annual production as an index of the available supply of so durable a commodity as farm machinery could hardly be considered plausible. As a guide to the scale of essential needs, therefore, measures of the total volume of such equipment on farms were patently the more deserving of primary emphasis.

A comparison of the growth of farm machinery supplies during the several years immediately preceding the war with indices of the intensification of agricultural productive efforts demonstrates that it was the latter that lagged behind. Between 1935 and 1940, for example, the total acreage of the 52 principal crops actually declined somewhat; and gains in total crop and pasture production as well as in gross farm production, which also includes the contribution of all livestock enterprises, were limited to no more than 10 percent. On the other hand, annual domestic purchases of tractors and other agricultural equipment by farmers increased in volume by more than half, and even the less volatile index of the total volume of machinery on farms rose by more than one-third. Moreover, the very considerable margin between gains in agricultural output and in farm machinery supplies just noted was widened further during 1941 as increases of 4 percent or less in the former were overshadowed by extraordinary gains of nearly one-third in the volume of such equipment purchased domestically and of more than one-sixth in the total volume of tractors and other machinery on farms.<sup>10</sup>

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urging him to permit greater production of farm machinery lest serious food shortages develop: "We have got [a similar] situation in transportation; we have got it in our communications. We cannot give the railroads everything they want and they tell us that the railroads are going to break down. We cannot go ahead and supply the civilian economy more materials than they have ever had before and at the same time produce the war program." (*House Hearings on Farm Labor and Production*, Serial 1, p. 104.)

<sup>10</sup> See Table 26.



Having already reviewed the facts relating to the supply and utilization of farm labor at some length, it may be sufficient at this point to note, in regard to the contention that greater farm machinery production was justified by serious farm labor shortages, that average annual farm employment declined by only 5 percent between 1935 and 1940 and by only 2 percent more during 1941<sup>11</sup> in comparison with increases of more than 100 percent in the annual volume of domestic farm machinery purchases between 1935 and 1941, and of more than 50 percent in the total volume of such equipment on farms.

Disputes about the adequacy of drawbar power on farms were rooted in the decision of priorities officials to control not only the total volume of materials to be made available for farm machinery production but also the allocation of such supplies among the major categories of machinery. Although quotas by types of equipment were first incorporated in the farm machinery program for 1942,<sup>12</sup> the sufficiency of drawbar power did not become a prominent issue until increasing support developed during the latter half of 1942 for writing drastic curtailments on tractor production into the farm machinery program for 1943. Those favoring such a course emphasized the large quantities of materials required by tractors and the exceptional convertibility of tractor plants to more urgent military supply programs. Opponents employed arguments similar to that presented in this connection by Assistant Secretary of Agriculture Grover Hill before the Senate Committee Investigating the National Defense Program:

The figures that I have show that horses are declining at the rate of about 300,000 a year . . . a little in excess of that. We also figure that a tractor will take the place of about 6 horses. Some people say 5 . . . anywhere between 5 and 6. That means it would take a minimum of from fifty to sixty thousand tractors a year to maintain your horsepower.<sup>13</sup>

This formulation of the problem may perhaps have been narrowed to accord with the Department of Agriculture's particular interest at that time in securing some relaxation of the War Production Board's Order L-170, which prescribed a reduction in tractor production to only 37,000

11 Average annual farm employment (thousands): 1935—11,131; 1936—11,047; 1937—10,892; 1938—10,789; 1939—10,740; 1940—10,585. (*Agricultural Statistics—1945*, p. 415.)

12 Limitation Order L-26 prescribed quotas for approximately 300 types of equipment in its attached Schedule A. (See *Senate Hearings Investigating the National Defense Program*, Part 17, pp. 7058-64.)

13 *Ibid.*, p. 6781.

units in 1943.<sup>14</sup> When viewed in broader perspective, however, it is difficult to detect so serious an emergency involving the drawbar power available on farms as to have dictated the reduction of materials and facilities allocations to more critical programs in the interest of raising tractor production. Drawbar power on farms had actually risen steadily since before 1940. Counting each tractor as equal to only 5 horses or mules 2 years old or over, the increase in the number of tractors on farms between the beginning of 1935 and the beginning of 1940 more than offset the corresponding decline in the number of work animals. Moreover, the drawbar power on farms at the end of 1942, and therefore at the approximate time of the above hearing, was more than 2 million work animal units above the level of January 1, 1940, or at least 20 times the volume represented by the additional 20,000 tractors which were at issue.<sup>15</sup> Incidentally, it may be observed that the decline in horse and mule numbers was also generously offset in its bearing on the transportation needs of farmers, inasmuch as the 20 percent reduction in mature horses and mules between the beginning of 1935 and the beginning of 1942 was accompanied by the very much expanded transportation capacity represented by increases of 18 percent and 30 percent respectively in the number of automobiles and motor trucks on farms.<sup>16</sup>

Those seeking an increase in government allocations of material for the production of farm machinery also claimed that the progressive aging of the equipment on farms was raising the volume and expense of repairs to a point justifying higher rates of replacement. But available data offered little support for this contention. The average volume of farm machinery purchased annually for domestic use during 1936-39 exceeded all previous peaks and the average volume of such purchases during 1940-42 soared more than one-fourth above even this earlier record. Hence, the average age of machinery on farms at the end of 1941 or at the end of 1942 was probably lower than had been the case in a good

<sup>14</sup> *Ibid.*, p. 6483.

<sup>15</sup> Number of horses and mules 2 years old and over on farms on January 1 (thousands): 1935—15,473; 1940—13,005; 1941—12,685; 1942—12,411; 1943—12,259. (*Agricultural Statistics—1946*, p. 364.)

Number of tractors on farms on January 1 (thousands): 1935—1,048; 1940—1,545; 1941—1,675; 1942—1,890; 1943—2,100. (*Ibid.*, p. 582.)

<sup>16</sup> Number of automobiles on farms on January 1 (thousands): 1935—3,642; 1940—4,144; 1941—4,190; 1942—4,285. (*Ibid.*)

Number of motor trucks on farms on January 1 (thousands): 1935—890; 1940—1,047; 1941—1,095; 1942—1,160. (*Ibid.*)

many years.<sup>17</sup> Indeed, a careful survey by the Bureau of Agricultural Economics revealed that more than three-fourths of all tractors on farms in 1942 were 10 years old or less, with the average age of the total supply only 6.4 years. Tractor-drawn equipment was of approximately this same age, with mowers and row-crop planters and cultivators somewhat newer still.<sup>18</sup>

Nor was the seemingly logical assumption that the need for repairs tends to increase heavily with the age of equipment confirmed by field studies. A study by Professor J. B. Davidson, Head of the Department of Agricultural Engineering at Iowa State College, based on a sample of 400 farms, found that the annual cost of repairing farm machines does not increase materially as the machinery becomes older.<sup>19</sup> Studies made by agricultural experiment stations in Kentucky and other states had apparently led to similar findings.<sup>20</sup> The explanation for a finding so at variance with common experience with automobiles and many other kinds of equipment lies in the extraordinarily low use factor of farm machinery.

Another argument that was offered in support of greater farm machinery production was that war needs had so intensified the use of available equipment as to justify an increased replacement rate. Expert testimony before the Truman Committee, however, brought out that, "the average farm machine is used only about 10 to 15 days per year," that, "the extra running of the machines . . . couldn't cause them to wear out much sooner," and that replacements are due primarily to the effects of weather and to obsolescence.<sup>21</sup> Claims of a substantial increase in the average use of available machinery were also open to question on the grounds, noted previously, that the volume of machinery on farms had grown more rapidly than appropriate indices of work requirements on farms without any comparably heavy decline in farm employment.

The enormous contributions of mechanization to raising the efficiency and the production potentials of the agricultural plant are beyond dispute.

17 Index of domestic purchases of tractors and other farm machinery at 1940 prices (1940=100): 1929—89.6; 1935-39 average—90.5; 1940-42 average—117. For further details, see Table 26.

18 A. P. Brodell and J. W. Birkhead, *Age and Size of Principal Farm Machines*, Bureau of Agricultural Economics, mimeographed, April 1943, pp. 3, 9-14.

19 J. B. Davidson and S. M. Henderson, *Life, Service and Cost of Service of Farm Machines on 400 Iowa Farms*, Iowa State College Bulletin, January 1942, p. 37.

20 Reported by Mr. Oscar W. Meier, Chief of the Agricultural, Food and Textile Machinery Unit, Office of Civilian Supply, War Production Board in *Senate Hearings Investigating the National Defense Program*, Part 17, pp. 6766-7.

21 *Ibid.*, p. 6769.

However, this should not be permitted to obscure the fact that the foregoing considerations offered little support for the position that farm machinery shortages were a direct preventive of further increases in food production during the early years of the war.<sup>22</sup>

### 3. FARM MACHINERY PRODUCTION CONTROL PROGRAMS<sup>23</sup>

The first priority controls on farm machinery production, issued in August 1941 and applicable only for the few months prior to the issuance of the program for the following year, permitted a total output, as shown in Table 25, equivalent to approximately 120 percent of the 1940 level. This ceiling was reported by the industry to be somewhat below its current operating rate. Nevertheless, no significant opposition to the order emerged, in all likelihood because prospective material shortages were already threatening to force an even more drastic curtailment.<sup>24</sup>

In the course of planning for the 1942 farm machinery program, the Farm Equipment Institute, representing the industry, submitted a report to the interested government agencies estimating prospective demand in 1942 at 138 percent of the 1940 production level and recommending that output be permitted to continue at 120 percent of 1940.<sup>25</sup> The Department of Agriculture submitted estimates of requirements which were based largely on "a survey through every county [agricultural defense] board and the Extension Service, asking them to give us what they believed would be the amount of farm machinery necessary to maintain production in 1942. We told them that metal was scarce and that the war effort

<sup>22</sup> Perhaps the most authoritative expression of this widely repeated view was offered before the Senate Committee Investigating the National Defense Program. Its chairman, Senator Truman, asked Clifford Townsend, Director of the Food Production Administration, whether there was "any possibility of increasing the food program with the machinery that has been allowed to you now?" To this Mr. Townsend replied, "I am fearful that there is no chance." (*Ibid.*, pp. 6783-4.)

<sup>23</sup> Much of the material in this section is based on the detailed historical report on *Farm Machinery and Equipment Policies of the War Production Board and Predecessor Agencies* by James A. McAleer to which reference has already been made. For a listing of other reports on the wartime activities of the War Production Board and other governmental agencies, see *Federal Historical Reports: A Summary of Publications, Manuscripts and Plans*, Bureau of the Budget, mimeographed, June 12, 1947.

<sup>24</sup> *Farm Machinery and Equipment Policies of the War Production Board and Predecessor Agencies*, p. 15.

<sup>25</sup> *Ibid.*, p. 23. This proposal reflected the view expressed by several members of the industry advisory committee at its meeting in December 1941 that in view of the usefulness of farm machinery, farmers' demands should be considered equivalent to needs and they should be permitted to buy as much as they could afford. (*Ibid.*, p. 36.)

required all the metal. They gave us the figures which total 107 percent of 1940."<sup>26</sup> When the farm machinery proposals came before the Supply Priorities and Allocations Board in September, Vice-President Henry A. Wallace took the position that, "a general principle of the Board should be that production needed for national defense is not to be diverted to increasing the amount of civilian consumption," and he won the support of the Board for this view.<sup>27</sup> In addition, a third set of estimates of farm machinery requirements had been prepared by officials of the Office of Price Administration and Civilian Supply which ranged from 80 to 90 percent of 1940.<sup>28</sup> The program which was finally authorized with the issuance of Limitation Order L-26 and General Preference Order P-95 on December 31, 1941, set quotas, as indicated in Table 25, of 80 percent of 1940 levels on new farm equipment for domestic use, 150 percent of 1940 levels for domestic repair parts, and the average of these two rates, approximating 96 percent of 1940, on production for export.<sup>29</sup> As a result of increasingly severe shortages of iron, steel and other materials, the original allocations for farm machinery were reduced by something more than 10 percent further in April 1942.<sup>30</sup>

Despite the progressive curtailments which were decreed, domestic purchases of tractors and other agricultural machinery by farmers during 1942 actually came to 120 percent of the 1940 level, thereby surpassing all previous records with the exception of 1941.<sup>31</sup> Three factors contributed to this serious slippage between objective and performance: the utilization of inventories of raw materials and parts carried over by manufacturers from the preceding year; additional allocations granted in response to appeals from individual producers; and the inadequacies of the preference rating system as a means of achieving positive control over the distribution of critical materials. Among these, the last seemed clearly to be the most important, thus counseling the modification of control technique which later led to the adoption of the Controlled Materials Plan.

26 *House Hearings on Agriculture Department Appropriation Bill, 1944*, p. 708. J. A. McAleer reports on the contrary that the analysis of this survey indicated a need for 120 percent of the 1940 production of new machinery and that the Department of Agriculture reduced its estimated requirements to 107 percent of 1940 only after an unfavorable reaction to the higher request by the Supply Priorities and Allocations Board. (*Farm Machinery and Equipment Policies of the War Production Board and Predecessor Agencies*, pp. 23-24.)

27 *Ibid.*, p. 23.

28 *Ibid.*, p. 24.

29 *Ibid.*, p. 33.

30 *Ibid.*, p. 50.

31 See Table 26.

The 1943 program for farm machinery reflected not only the farthest extension of curtailment efforts but also, after subsequent revisions of its original terms, the beginnings of the reverse trend toward the relaxation of output limitations. A number of contending estimates of 1943 farm machinery requirements had emerged during the spring of 1942, of which the most important may be summarized as follows:<sup>32</sup>

	Percentage of 1940 Domestic Production		
	Total	New Equipment	Repair Parts
Department of Agriculture .....	70	50	150
WPB Farm Machinery Branch .....	65	50	126
WPB Division of Civilian Supply .....	45	27.6	145.5

These differences were compromised by the WPB Requirements Committee early in July in favor of limitations of 38 percent and 150 percent, respectively, of 1940 production levels for new equipment and repair parts.<sup>33</sup> But the continued deterioration of materials supplies and accompanying pressure from the Army and Navy Munitions board further to curtail allocations for farm machinery<sup>34</sup> led to the re-opening of the whole issue. In September 1942, the Division of Civilian Supply submitted to the WPB Requirements Committee a new proposal calling for quotas in terms of 1940 output of 23 percent on new equipment, 137 percent on repair parts, and 60 percent on exports, or a total allocation of materials equivalent to 42 percent of the industry's 1940 consumption.<sup>35</sup> In spite of a resurgence of heated disputes, this recommendation was approved as the basis for Limitation Order L-170, which was issued on October 19, 1942.<sup>36</sup>

From the very date of its release, L-170 became the focus of a mounting array of attacks—from farmers, agricultural equipment producers and dealers, farm organizations, members of Congress, and from the Department of Agriculture. Protests were voiced at widespread meetings, critical letters poured into Washington, editorial comment was preponderantly unsympathetic. On December 10 the Secretary of Agriculture told a press conference that L-170 did not provide enough farm machinery to meet the requirements of the 1943 food production programs. Six days later Sena-

<sup>32</sup> *Farm Machinery and Equipment Policies of the War Production Board and Predecessor Agencies*, p. 74.

<sup>33</sup> *Senate Hearings Investigating the National Defense Program*, Part 17, Exhibit No. 682, p. 7092.

<sup>34</sup> *Ibid.*, Exhibit No. 672, p. 7082.

<sup>35</sup> *Farm Machinery and Equipment Policies of the War Production Board and Predecessor Agencies*, p. 89.

<sup>36</sup> *Senate Hearings Investigating the National Defense Program*, Part 17, Exhibit No. 684, p. 7098.

tor Harry S. Truman expressed this same position to the newspapers, adding that the matter was being investigated. In the House, Representative Karl E. Mundt of South Dakota urged a special investigation of the farm machinery situation. On December 24 Secretary of Agriculture Wickard sent a letter to the Chairman of the War Production Board renewing his demands for an increase in allocations for farm machinery and specifying minimum requirements equal to 40 percent of the 1940 production of new equipment and 167 percent of the 1940 output of repair parts.<sup>37</sup> Under such pressures, not even the energetic resistance of the Army and Navy spokesmen was able to delay upward revisions in L-170 much longer. Approval of the increase in allocations for repair parts which had been requested by Secretary Wickard was announced by the WPB Requirements Committee on January 14, the opening date of the Truman Committee's hearings on farm machinery.<sup>38</sup> On the day that the Truman Committee issued its *Interim Report on Farm Machinery and Equipment*, recommending that farm machinery production be expanded by completing the L-170 program in 9 months instead of the 12 planned originally,<sup>39</sup> the Requirements Committee added 50,000 tons of Bessemer, re-rolled or discard carbon steel to its previous authorization for farm machinery. Three weeks later, it voted to approve the remainder of the December 24 request of Secretary Wickard in full, an action which was formalized with the published revision of L-170 on March 6. Pressure for the relaxation of output limitations mounted further as expressions of concern about farm machinery shortages were directed to the Chairman of the War Production Board by Director of Economic Stabilization James F. Byrnes and by President Roosevelt as well. An additional allotment of 47,000 tons of Bessemer steel was soon offered for farm machinery production, only to have it declined by the Department of Agriculture. The latter's stubborn demand for more carbon steel finally led to a supplementary allocation of 35,000 tons of this precious material for the second quarter of 1946 to be used in producing harvesting equipment.<sup>40</sup>

37 *Ibid.*, Exhibit No. 663, pp. 7055-64, especially p. 7057.

38 *Farm Machinery and Equipment Policies of the War Production Board and Predecessor Agencies*, p. 112.

39 Senate Committee Investigating the National Defense Program, *Second Annual Report*, U. S. Government Printing Office, 1943, pp. 171-194, especially pp. 175, 192.

40 *Farm Machinery and Equipment Policies of the War Production Board and Predecessor Agencies*, pp. 113, 115, 119, 120.

TABLE 25  
LEVELS OF PRODUCTION AUTHORIZED UNDER GOVERNMENT FARM  
MACHINERY PROGRAMS, 1941-45

Expressed as percentage of materials used in 1940<sup>1</sup>

Program Year	Period Covered	Order Number	Grand Total	Domestic			Export
				Total	New Ma- chines	Repairs	
1940	November 1939-October 1940	None	100	100	100	100	100
1941	August-December 1941	P-32, P-33	120	...	...	...	...
1942	November 1941-October 1942	L-26, P-95	96	96	80	150	96
	Revision, April 1942	" "	86	86	...	...	86
1943	November 1942-October 1943	L-170	42	36	23	137	60
	Revision, March 1943	" "	62	62	45 <sup>2</sup>	167	60
1944 <sup>3</sup>	July 1943-June 1944	L-257, 257-a	120	130	126	no limit	98
	Revision, November 1943	" "	146	150	138	<sup>4</sup>	105
1945 <sup>3</sup>	July 1944-June 1945	L-257, 257-a	138	140	135	no limit <sup>4</sup>	130
	Including carry-over	" "	154	160	146	no limit <sup>4</sup>	130

<sup>1</sup> Percentages are in terms of materials authorized under approved programs, including both farm and non-farm use, but not including materials available for inventories. 1940 base figures from Farm Equipment Institute with adjustments to ensure comparability.

<sup>2</sup> This estimate is 5 percent higher than the Secretary of Agriculture's approved program, allowing for a liberal appeals procedure and other changes.

<sup>3</sup> Breakdown percentages are approximate. They are based on carbon steel allotments by the War Production Board Requirements Committee, and do not coincide exactly with allotments received by the industry. For 1944-45 computations, total use of carbon steel in 1940, with track-laying tractors excluded, has been estimated at 1,000,900 tons; export use at 94,850 tons. Carry-overs from previous programs are included.

<sup>4</sup> Reliable tonnage comparisons with 1940 are not available. Production of repair parts was scheduled at 337 percent of 1940 and produced at 283 percent in terms of value for 1944, and was to be maintained at a similar level for 1945.

Source: *Farm Machinery and Equipment Policies of the War Production Board and Predecessor Agencies*, p. 188.

As a result of the powerful influences which had been rallied in support of heavier farm machinery production, the planning of the 1944 program went forward under the general policy of granting such production the highest civilian rating possible short of interference with the direct military programs.<sup>41</sup> Although the urgency of competitive claims for still-scarce materials injected some differences about estimated requirements into negotiations even in this favorable atmosphere, advocates of more generous treatment for farm machinery had little basis for serious objection to Limitation Order L-257 (and L-257a, its export counterpart), issued on June 15, 1943 after prior communication to some of the more critical members of Congress. These authorizations contemplated a total production during the ensuing year equivalent to 120 percent of output in

<sup>41</sup> *Farm Machinery and Equipment Policies of the War Production Board and Predecessor Agencies*, p. 127.



1940, one-sixth of it representing a carry-over of uncompleted portions of the L-170 program.<sup>42</sup> A new wave of criticism, centered around the delay in effectuating the proposed sharp increase in output, led to the further raising of program objectives in November in an effort to offset earlier shortcomings.

So powerful was the pressure in behalf of expanded farm machinery production that one major official of the War Production Board ranked the farm machinery program as the fourth most important among all of the agency's war supply programs, ranking immediately after landing craft, high octane gasoline and military trucks. Other official statements sometimes ranked heavy bombers, too, ahead of farm machinery.<sup>43</sup> Output continued to lag behind goals during the early part of 1944, largely because of shortages of industrial manpower and of machinery components, but intensive remedial measures—including additional priority assistance, the assignment of special production expeditors in the field,<sup>44</sup> and supplemental allocations of needed materials—finally made possible almost complete fulfillment of the revised program.<sup>45</sup>

By the end of 1943, when the 1945 farm machinery program was being formulated, the primary objective of attendant controls on materials had swung away almost completely from the reduction of such output to the minimum levels necessary to sustain food production programs; instead, the emphasis was on expanding the manufacture of such equipment as much as possible, short of hindering direct military supply programs. Accordingly, materials allocations were determined more by the industry's ability to make prompt use of such supplies than by the provable contribution of such allocations to increased agricultural production. The

<sup>42</sup> *Ibid.*, pp. 123, 132.

<sup>43</sup> *Ibid.*, p. 146.

<sup>44</sup> "The Farm Machinery and Equipment Division in the War Production Board, charged with the administration of L-257, proceeded to expedite production aggressively. With the additional information currently received from manufacturers, it was possible to keep abreast of developments from month to month and to transfer quotas (from one producer to another) in frequent instances. Shortages of component parts like malleable castings, engines, chains and disks had become serious bottlenecks to farm machinery production; to assist manufacturers in breaking these bottlenecks a corps of expeditors was stationed in the vicinity of the main production center." (Erling Hole, *Farm Machinery and Equipment*, Department of Agriculture War Records Monograph-1, mimeographed, April 1946, pp. 10-11.)

<sup>45</sup> Production fell short of the 1944 farm machinery program by only 3.6 percent, if credit is allowed for July production of quotas carried over from June. (*Farm Machinery and Equipment Policies of the War Production Board and Predecessor Agencies*, p. 153.)

extension of Limitation Orders L-257 and L-257a for the year beginning July 1, 1944, which was officially approved on February 3, set quotas no higher than the rate authorized for the preceding program except for an additional increment allowed to cover the still unfulfilled carry-over from the L-170 program which had expired in July 1943. The failure to raise quotas, however, was not due to any lingering efforts to limit production but to the unlikelihood that the industry could achieve any greater increase in output in view of continued bottlenecks of one kind and another. Indeed, the right of appeal from quotas was established for companies which could demonstrate the availability of manpower and components for additional production.<sup>46</sup> Except for the temporary threat that material allocations would be curtailed during the second quarter of 1945 because of the Battle of the Bulge, farm machinery production during the year was limited essentially only by the inability of manufacturers to get all the labor and components sought by them.

Governmental controls on the level of farm machinery production were terminated four years after they began by the withdrawal of L-257 on August 21, 1945. The comparative treatment accorded to the industry during this period was summarized by one qualified official as follows: "The farm machinery industry was one of the last civilian industries to be heavily curtailed, and one of the first to be returned to the full pre-war level of production."<sup>47</sup>

#### 4. ADEQUACY OF TOTAL WARTIME FARM MACHINERY SUPPLIES

Despite avowed governmental efforts to curtail farm machinery production and to maximize the expansion of agricultural output, gains in the latter during the war continued to lag far behind the growth of available farm machinery supplies.

Table 26 shows that domestic purchases of tractors and other farm machinery by farmers were substantially in excess of all peacetime records in every war year except 1943. After a minor reduction in 1942, which still left the 1941-42 average at 25 percent above the 1940 level, the volume of

<sup>46</sup> *Ibid.*, p. 169. In an address dealing with farm machinery production prospects in 1945, F. B. Northrup, Director of the Office of Materials and Facilities in the War Food Administration, emphasized that, "Problems of raw materials are no longer involved in the matter of farm machinery. Practically speaking, we can obtain all the steel and other material that we need (i. e., via WPB allocations). That has been true for several months. The bottleneck will be foundry capacity and labor problems in the factories." (Agricultural Outlook Conference, November 14, 1944.)

<sup>47</sup> Statement by James W. Fesler, Chief of the Policy Analysis and Records Branch, Office of the Executive Secretary of the War Production Board in transmitting J. A. McAleer's report. (*Ibid.*, p. i.)

equipment purchased finally reflected the impact of serious curtailment efforts by declining in 1943 to 20 percent below the 1940 level. Upward revision of L-170, however, and the successively more generous allocations which were approved thereafter, raised equipment purchases to 143 percent of the 1940 level in 1944 and to 159 percent in the following year. Indeed, despite the bitterly contested and short-lived reduction effected in 1943, the average volume of such purchases during 1943-45 actually exceeded the previously unsurpassed 1941-42 average.

Wartime increases in the volume of tractors and other machinery on farms were of comparably impressive proportions. By the end of 1942, just after the issuance of L-170, there were 36 percent more tractors and 28 percent more of other machinery on farms than three years earlier. Both of these totals grew further during the next year, though at reduced rates. Sharply increased purchases thereafter resulted in raising the volume of tractors and of all other machinery on farms to the astonishing total by the end of 1945 of two-thirds above the level prevailing at the beginning of 1940.

TABLE 26  
FARM MACHINERY SUPPLIES AND AGRICULTURAL PRODUCTION, 1935-1945  
Index Numbers (1940 = 100)

Year	Acreage of 52 Principal Crops, Planted or Grown <sup>1</sup>	Total Production of Crops and Pasture <sup>2</sup>	Gross Farm Produc- tion <sup>2</sup>	Tractors and All Other Farm Machinery <sup>3</sup>		
				Domestic Purchases by Farmers <sup>4</sup> (1940 prices)	Volume on Farms, Jan. 1 <sup>5</sup>	
					Tractors	All Other
1935 .....	104	90	91	64	68	75
1935-39 average	103	93	93	85	81	93
1940 .....	100	100	100	100	100	100
1941 .....	100	103	104	131	109	105
1942 .....	101	113	114	120	123	115
1943 .....	104	107	111	80	136	128
1944 .....	105	114	116	143	144	133
1945 .....	103	112	115	159	156	148
1946 .....	...	...	...	...	168	168

<sup>1</sup> From Table 7.

<sup>2</sup> From Table 4.

<sup>3</sup> Excluding automobiles and motor trucks.

<sup>4</sup> Based on the value of such purchases as estimated by the Division of Statistical and Historical Research of the Bureau of Agricultural Economics in August 1947, and on the index of prices paid for farm machinery by farmers published on the inside cover of the March 1947 issue of the Bureau's semi-annual publication, *The Farm Cost Situation*.

<sup>5</sup> *Ibid.*, p. 6 plus estimates for 1935 supplied in August 1947 by the Bureau's Division of Farm Management and Costs.

It may be considered of direct significance for any appraisal of the adequacy of wartime farm machinery supplies that, as may be seen in Table 26, the foregoing gains surpassed very substantially any comparable increases in the intensity of agricultural productive efforts. Between 1940 and the close of 1942, the acreage of the 52 principal crops had grown by only one percent while crop production and gross farm production had increased by 13-14 percent. During this same period, the annual volume of domestic equipment purchases by farmers had risen by 20 percent and the volume of tractors and other equipment on farms by 36 percent and 28 percent, respectively. Between the beginning of 1943 and the end of 1945, the acreage of principal crops increased by 2 percent and agricultural output by one percent or less, in striking contrast to an increase of 32 percent in the annual volume of domestic equipment purchases and gains of more than one-fourth in the volume of tractors and other machinery on farms. Comparing averages for 1943-45 with those for 1941-42 reveals that the volume of tractors and other machinery on farms increased by approximately 25 percent while measures of agricultural output rose by 5 percent or less.

Additional evidence of the notable advance of agricultural mechanization during the war is provided by a comparison of gains in farm machinery supplies with reductions in the number of work animals on farms. The net increase in the number of tractors on farms between the beginning of 1940 and the end of 1945 came to 1,040,000 units,<sup>48</sup> or more than twice as great as had been considered probable during the entire decade of the 40's by an authoritative Department of Agriculture forecast on the eve of war.<sup>49</sup> Inasmuch as the number of mature horses and mules on farms during this same period declined by only 2,240,000, there was a net gain of 14 percent in the work animal equivalent of available drawbar power on farms.<sup>50</sup> It may also be noted in this connection that such effects as the decline in work animal numbers may have had on the farmer's transportation resources were easily offset by an increase of 47 percent in the number of motor trucks on farms.<sup>51</sup>

48 Number of tractors on farms on January 1 (thousands): 1940—1,545; 1944—2,210; 1945—2,425; 1946—2,585. (*Agricultural Statistics—1946*, p. 582.) For data relating to 1935 and to 1941-43, see footnote 15 in this chapter.

49 *Report of the Secretary of Agriculture, 1940*, p. 62.

50 Number of horses and mules 2 years old and over on farms on January 1 (thousands): 1940—13,005; 1941—11,874; 1945—11,389; 1946—10,765. (*Agricultural Statistics—1946*, p. 364.) For data relating to 1935 and to 1941-43, see footnote 15 in this chapter.

51 Number of motor trucks on farms on January 1 (thousands): 1940—1,047; 1944—1,370; 1945—1,460; 1946—1,550. (*Agricultural Statistics—1946*, p. 582.) Incidentally,

The capacities of farm workers and of agricultural machinery are interchangeable, of course, only in certain categories of work. In respect to such categories, however—and it is only in respect to these that advocates of increased farm machinery production could legitimately have pressed their claims on grounds of tightening labor supplies—gains in mechanization far outweighed reductions in farm employment. Average annual farm employment declined by 2 percent between 1940 and 1942, while the volume of tractors and other machinery on farms grew by some 30 percent between the beginning of 1940 and the end of 1942. Compared with 1940, average farm employment had declined by 7 percent in 1945, whereas the volume of machinery on farms had grown by 68 percent between the beginning of 1940 and the end of 1945.

Having found that wartime supplies of agricultural machinery were more than generously adequate in comparison with even the highest pre-war standards of the ratio of the volume of such equipment on farms either to agricultural output or to the availability of farm labor and work animals, the adequacy of equipment supplies may now be appraised by comparison with the Department of Agriculture's own findings with regard to need.

In formulating farm machinery production proposals, the Department of Agriculture laid considerable stress on its determination of needs through annual questionnaire-type surveys reaching not only every state but into the individual counties. Experience demonstrates that such surveys, especially when conducted in the face of threatened restrictions and when no provision is made for appraisal of the urgency of the needs envisioned by respondents, tend to over-estimation rather than under-estimation of requirements. Nevertheless, a comparison of even these "needs" with resultant purchases tends to confirm the adequacy of available farm machinery supplies during the period when allocations controls were most restrictive. As was reported earlier, the first of these surveys by the Department concluded that requirements for 1942 would approximate 107 percent of the level of new farm machinery supplies made available in 1940.<sup>52</sup> Actual domestic purchases of such equipment by farmers in 1942, however, totalled 120 percent of the 1940 volume. The next year's survey placed 1943 requirements at 50 percent of the 1940 level,<sup>53</sup> but the volume

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despite the severe curtailment of civilian automobile production, the number on farms declined by less than one percent from 4,144,000 in 1940 to 4,100,000 at the beginning of 1946. (*Ibid.*) Also see footnote 16 in this chapter.

<sup>52</sup> From statement of M. Clifford Townsend already referred to in *House Hearings on Agriculture Department Appropriation Bill, 1944*, pp. 708-9.

<sup>53</sup> *Ibid.*

of new supplies surpassed estimated needs by an even wider margin than in the preceding year, coming to 80 percent of the base year volume. For 1944, the Department of Agriculture's field survey estimated requirements as equivalent to 1940 output,<sup>54</sup> but the actual volume of machinery purchased exceeded this objective by over 40 percent. It seems reasonable to conclude once again, therefore, that farm machinery supplies during the war were easily in excess of essential requirements.

While it is unquestionably true that many individual farmers were at times unable to secure urgently needed machinery, the most effective cause of these predicaments was to be found not in the general restrictions placed on farm machinery production but in the maldistribution and serious under-utilization of the machinery already on farms.

### 5. DISTRIBUTION OF FARM MACHINERY

The wide divergence between the pre-war patterning of economic pressures and the urgencies of economic mobilization counseled the earliest possible introduction of governmental measures directed toward altering the distribution of farm machinery within the total agricultural plant and toward minimizing the under-employment of available supplies of such equipment.

When the war came, it found our farm machinery, especially tractors and tractor-drawn equipment, heavily concentrated in the North Central States, while other areas, which had had to contend with more adverse weather or with a less favorable market for their products or which had long been accustomed to abundant and cheap farm labor supplies, had lagged far behind. Differentials of significant proportions had also developed intra-regionally—between the western fringe of the Corn Belt and central Illinois, for example—as well as by farm-size categories and by the economic status of operators.

The task facing mobilization authorities in respect to the distribution of available farm machinery was not to grind down all of the differentials which have been noted, but rather to modify current distribution patterns so as to accord more closely with the locus of greatest war production potentials. The relative profitability of crops in peacetime was far from coincident with their comparative essentiality for war purposes. The farmers who had been most prosperous prior to the outbreak of hostilities were not always those capable of contributing the largest additional increments in needed production thereafter. The regions which had been most advantaged by pre-war acquisitions of equipment were seldom those which could promise the greatest dividends of released manpower in re-

<sup>54</sup> Erling Hole, *op. cit.*, p. 9.

turn for further allocations of agricultural machinery. Nor could the wartime production of critical foods have been concentrated solely in the areas which had long specialized in growing them and which had as a consequence already accumulated the appropriate equipment.

Two lines of remedial action presented themselves: first, to unfreeze the peacetime distribution by inducing the relatively better supplied farmers to resell some of their equipment for removal to seriously deficit areas; second, immediately to redirect the flow of all new machinery supplies. No serious efforts were ever made to apprehend the possible benefits of the former. The latter form of control was attempted through a system of rationing, but its introduction was so belated, its objectives so limited and its operations so compromised that resultant achievements were of comparatively minor significance.

No controls whatever had been exercised over the distribution of the huge 1941 production of farm machinery. Rationing proposals for such equipment were first advanced by the Office of Price Administration and Civilian Supply in the fall of 1941, in connection with the planning of the 1942 allocations program. The very fact that farm machinery production was expected to continue at high levels in 1942 emphasized that the prompt redirection of such supplies could have gone far toward correcting existing maldistribution. However, such proposals were rejected by the Department of Agriculture as unnecessary,<sup>55</sup> apparently on the ground that continued heavy output precluded the emergence of such aggressive competition among prospective buyers of equipment as was felt to be a necessary pre-condition to popular acceptance of rationing controls. The drastic limitations on new production subsequently planned for the 1943 farm machinery program led to renewed pressure during the spring of 1942 for the introduction of rationing along with the curtailing of manufacture. Farm equipment producers expressed strong opposition to these proposals, objecting not only to governmental intervention in distribution matters which were felt to lie wholly within the competence of the industry but also to the suggested guiding policy of deviating from peacetime regional distribution patterns in favor of reinforcing the wartime adjustments in agricultural output sought by responsible food officials.<sup>56</sup> But the fact that the State Agricultural War Boards had reported widespread complaints about the manufacturers' distribution of farm machinery in

<sup>55</sup> *Farm Machinery and Equipment Policies of the War Production Board and Predecessor Agencies*, p. 37.

<sup>56</sup> *Ibid.*, pp. 94-95.

1942,<sup>57</sup> and the likelihood that a sharp reduction in total new production would intensify the scale and bitterness of such complaints left the Department of Agriculture no alternative but to acquiesce to the demands for rationing.

Rationing controls on farm machinery lasted only two years, and followed a course of progressive relaxation even during that brief period. The first such program, initiated on November 28, 1942 with the issuance of the Department of Agriculture's Rationing Order C, designated state and county distribution quotas for 31 types of machinery and state quotas alone for an additional 34 types. As the primary instrument for promoting desired inter-regional shifts in the distribution of machinery on farms, state quotas were appropriately determined at first in accordance with the relationship in each state between available equipment and its needs as determined by the 1943 agricultural production goals. Resulting deviations from pre-war distribution patterns were soon curtailed, however, with the revision of these quotas so as to conform more closely to the pattern of inter-state distribution suggested by equipment manufacturers. The county quotas, which provided a means of altering the peacetime distribution of machinery within the individual states, were later cancelled outright as a hindrance to prompt distribution.<sup>58</sup> Nevertheless, a further reduction in the extent of governmental control over the distribution of farm machinery was apparent in the farm machinery rationing program for 1944, which became effective on October 15, 1943 with the issuance of Food Production Order 14. This program reduced coverage to 38 types of farm machinery and, in general, authorized manufacturers to distribute 80 percent of their production of these items according to their own inclinations, thus retaining only 20 percent of the total subject to possible control by the War Food Administration.<sup>59</sup> Bold use of controls over the remaining 20 percent of output might still have permitted significant alteration of the distribution patterns resulting from the understandable preference of manufacturers, with extensive distributive networks to maintain, for allocating supplies on the basis of past sales. But such effective compensatory allocations were rendered less likely by the procedure adopted for distributing the equipment reserve, which entailed several meetings with manufacturers prior to the final determination of

<sup>57</sup> Erling Hole, *op. cit.*, p. 14.

<sup>58</sup> *Ibid.*, p. 16.

<sup>59</sup> See testimony of James W. Millard, Director of the Office of Materials and Facilities, War Food Administration in *House Hearings on Agriculture Department Appropriation Bill, 1945*, pp. 806-810.



reserve allocations.<sup>60</sup> Although another rationing program for farm machinery was placed in operation on July 20, 1944, with controls made somewhat less obtrusive still, all such rationing and distribution controls were terminated on September 28, 1944, with the exception of those relating to corn pickers, which were withdrawn early in November.<sup>61</sup>

There is, consequently, little cause for surprise in the close similarity between the distribution of agricultural equipment on farms at the time of this country's entrance into the war and at the beginning of the last year of hostilities. The Bureau of Agricultural Economics has published comparable data on the regional distribution of 40 major types of farm machinery both for January 1, 1942 and for January 1, 1945.<sup>62</sup> In the case of 34 of these, changes in the proportional share held by each region varied by only a few tenths of one percent between the dates noted and hence may reasonably be considered insignificant. In the case of two more types—one-way disk plows or tillers and tractor-drawn row-crop cultivators—changes in each region's share of the national total averaged only one-half of one percent. Of the remaining four, farm tractors, which were the most important from the standpoint of manufacturing value, had scored the heaviest gain in numbers—about 27 percent—and had been the most highly concentrated regionally of the types of machinery applicable throughout the country. Nevertheless, the upward or downward adjustment in each region's share of the total number of such units on farms averaged less than nine-tenths of one percent, with the largest decline being the reduction in the Corn Belt's share from 29.6 percent to 27.6 percent.<sup>63</sup> The comparable figure for the average change in the regional

<sup>60</sup> Erling Hole, *op. cit.*, p. 17.

<sup>61</sup> *Ibid.*, p. 18.

<sup>62</sup> A. P. Brodell and M. R. Cooper, *Number and Duty of Principal Farm Machines*, Bureau of Agricultural Economics, mimeographed (with later revised data for tractors inserted), November 1944, especially pp. 51-58.

<sup>63</sup> The relative distribution of tractors on farms by agricultural regions was as follows:

	January 1, 1942	January 1, 1945
North Atlantic .....	9.7%	10.7%
Corn Belt .....	29.6	27.6
Lake States .....	16.3	15.9
Great Plains .....	15.8	14.4
South Atlantic .....	4.2	5.6
South Central .....	4.2	5.4
Oklahoma-Texas .....	9.6	9.6
Mountain .....	5.0	5.0
Pacific .....	5.6	5.8
United States .....	100.0%	100.0%

(Based on *Number and Duty of Principal Farm Machines*, p. 51.)

distribution of tractor-drawn row-crop planters was 1.3 percent. Only combines and peanut pickers experienced more pronounced shifts in regional distribution, with adjustments in the former—due primarily to the sharp increase in soybean production—doubling the average for tractors, and adjustments for pickers reaching even greater proportions.

The stubborn persistence of such pre-war patterns was traceable in large measure to the absence of new governmental and commercial organization to supplant that which had been evolved during the years preceding the war and which had hardened in a pattern congruent with the distribution of peacetime profit potentials. The role of such peacetime rigidities in hindering the distribution of adjustments required by mobilization may be illustrated by reference to early efforts to apportion peanut pickers, which, as just noted, eventually underwent greater shifts in regional distribution than any other major category of farm machinery. Expanded need for peanut oil led to intensive efforts to encourage its production throughout the South. But, although the Oklahoma-Texas region and the Mississippi-Louisiana-Arkansas region had increased their 1942 acreages of peanuts for threshing over 1941 far more rapidly than the older producing belt,<sup>64</sup> the Georgia-Florida-Alabama Peanut Association was permitted to contract for more than 85 percent of the 3,600 peanut pickers authorized under War Production Board Limitation Order L-26. On November 21, 1942 this Association reported that it had received 2,882 of the pickers (threshers) from manufacturers, but that it had been unable to sell 1,062 of them. Yet on November 23, 1942 a special report by the Bureau of Agricultural Economics warned that, "insufficient threshers, particularly in the new peanut area, appear evident."<sup>65</sup>

## 6. UNDER-UTILIZATION OF FARM MACHINERY

Serious as was the maldistribution of machinery on farms, however, it represented far less of a loss relative to production potentials than the general under-utilization of available machinery, caused only in part by maldistribution.

<sup>63</sup> (*continued*)—An earlier report provided comparable data on tractors for January 1, 1941, but the average adjustment by regions between that date and the beginning of 1945 still falls short of one percent. (A. P. Brodell and M. R. Cooper, *Fuel Consumed and Work Performed by Farm Tractors*, Bureau of Agricultural Economics, mimeographed, March 1942, p. 5.)

<sup>64</sup> The acreage of peanuts picked and threshed increased from 1941 to 1942 by 61 percent in the Georgia-Florida-Alabama region, by 242 percent in the Mississippi-Arkansas-Louisiana region and by 321 percent in Oklahoma and Texas. (*Crop Production—1942 Annual Summary*, December 1942, p. 45.)

<sup>65</sup> *Senate Hearings Investigating the National Defense Program*, Part 17, p. 7074.

There is general realization that some farmers make relatively little use of their equipment and also that some kinds of equipment tend to be left idle for longer periods than others. It is even reasonable to anticipate some regional differences in the proportion of available machine hours which are actually utilized. But these anticipated use differentials, which are borne out by field research, pale before the extraordinary pervasiveness of machine idleness in the United States—involving all types of machines, virtually every region, and the overwhelming proportion of all farms.

American row-crop planters, row binders, mowers, rakes, grain drills and grain binders were used, on the average, less than 80 hours in 1941. Corn pickers, grain threshers, combines and cream separators were used less than twice that many hours per year.<sup>66</sup> Such were the kinds of facts which lay behind Dr. H. R. Tolley's statement to the Subcommittee on Agriculture of the House Appropriations Committee, "... On many farms and in many places farm machinery is not fully utilized. There are many farm machines that are owned and used by individual farmers which up to the present time [are used] only a few days during the season."<sup>67</sup>

Even tractors, with their wider applicability, were used on an average of only about 500 hours annually during 1940 and 1941. There are, of course, no absolute standards of the maximum number of hours that tractors could be used during the year, but it is indicative of practical potentialities that in 1940 one tractor out of every eight in this country was used 1000 hours or more, while almost four out of every eight were employed less than 400 hours.<sup>68</sup> How serious were the losses entailed in such idleness may be measured by the fact that if the average annual use of tractors had been increased by 100 hours annually, the work equivalent of nearly 400,000 tractors would have been added to the available supply in

66 A. P. Brodell and J. W. Birkhead, *Work Performed with Principal Farm Machines*, Bureau of Agricultural Economics, mimeographed, May 1943, p. 14.

67 *House Hearings on Agriculture Department Appropriation Bill, 1944*, p. 176.

68 The total utilization of tractors in 1940 was as follows:

Tractor-Type	Number on Farms	Percentage Distribution by Hours Used in 1940						
		Under 200	200-399	400-499	600-799	800-999	1000-1399	1400 and over
	(1/1/41)							
General Purpose .	932,000	10.0	27.6	25.4	15.3	8.1	9.9	3.7
Standard Wheel .	622,000	26.8	30.1	18.4	10.5	4.4	7.7	2.1
Track Laying ...	83,000	13.2	24.0	16.1	15.3	10.0	12.4	9.0
Total .....	1,637,000	16.5	28.4	22.3	13.5	6.8	9.2	3.3

(Source: *Fuel Consumed and Work Performed by Farm Tractors*, p. 10.)

1943. Compared with its limited efforts to realize these really substantial potentials, the Department of Agriculture would seem to have expended disproportionate energy in seeking to induce the War Production Board to raise the authorization for tractor production in 1943 from 37,000 to 50,000 or even 70,000.<sup>69</sup>

Rough estimates of potentials such as these have been dismissed all too frequently on the grounds that it is impossible to attain the high levels of utilization of tractors in most parts of the country that have been achieved in the Oklahoma-Texas region. Despite its appeal to logic, however, this contention is not supported by actual operating data from the field. In the survey already referred to, for example, data on the utilization of general purpose tractors, the largest category, showed that every region used at least 8 percent of its machines 1000 hours or more annually (in comparison with the national average of 13.6 percent), and that every region used at least 21 percent of its machines less than 400 hours annually (in comparison with the national average of 37 percent).<sup>70</sup>

Thus, the problem of under-utilization seems to have been common to all regions, though in somewhat different degrees, and hence would appear to stem from causes other than unalterable physical differentiations among regions. The fact that the utilization of other major categories of farm machinery exhibited the same significant intra-regional variations as have been noted in the case of tractors adds further weight to this generalization.<sup>71</sup>

Summary comments on farm machinery developments during the war have frequently assumed that substantial gains were effected in the utilization of available equipment.<sup>72</sup> It is well to recall, however, that although instances of such advances were undoubtedly widespread, there is as yet no evidence of significant increases in the average utilization of the total equipment of our agricultural plant. On the contrary, the fact that the

<sup>69</sup> See testimony of Assistant Secretary of Agriculture Grover B. Hill in *Senate Hearings Investigating the National Defense Program*, Part 17, p. 6781. Also see the letter from Secretary of Agriculture Claude R. Wickard to Donald M. Nelson, Chairman of the War Production Board, dated December 24, 1942. (Exhibit No. 663, *ibid.*, especially p. 7062.)

<sup>70</sup> *Fuel Consumed and Work Performed by Farm Tractors*, p. 10.

<sup>71</sup> Data on such intra-regional variations in the hourly use of major types of farm machinery were given for row-crop planters, mowers, hay rakes, grain drills, grain binders, combines, row binders, corn pickers, manure spreaders, grain threshers, cream separators and milking machines in *Work Performed with Principal Farm Machines*, Tables 7, 9, 11, 13, 15, 17, 19, 21, 22, 25, 29 and 30.

<sup>72</sup> For example, see *Report of the Secretary of Agriculture*, 1945, pp. 72-73.

volume of machinery on farms grew much more rapidly than indices of agricultural productive effort suggests that average utilization may have actually declined and, at any rate, that such improvements as may have been achieved in some areas were probably offset by increased idleness elsewhere.

Perhaps the simplest means of reducing the idle time of machinery already on farms would have been to increase the number of farmers employing each machine. Whether such sharing took the form of joint ownership, of neighborly lending back and forth, or of more widespread custom machine work, the net effect would have been to reduce the number of machines necessary to service the agricultural needs of an area and, incidentally, to reduce the average investment in equipment per farm. Clear as the advantages would have been, to the nation as well as to the individual,<sup>73</sup> relatively little was accomplished along these lines during the period under review.

Federal officials began advising farmers of the need for more pooling and joint use of agricultural equipment early in 1942. Occasional statements by leading officials were supplemented by educational materials further encouraging such mutual aid among neighbors.<sup>74</sup> But the results merely demonstrated the inadequacy of verbal exhortations when unaccompanied by field leadership, supervisory aid and even financial assistance.<sup>75</sup>

<sup>73</sup> Some controversy over this view emerged during a discussion, before the Senate Sub-committee on Food Supply, of the Department of Agriculture's efforts to have farmers applying for rationed machinery pledge their willingness either to share such equipment or to make it available on a custom basis:

"Secretary [of Agriculture] Wickard: ... we don't have enough farm machinery to go around and rather than see crops waste I think we ought to be sure machines are fully utilized, and they ought to go to the people who will see that the machines are used to save our crops. Otherwise we are wasting steel and machinery which is needed very badly in our war effort. And I don't see anything communistic about it. " Senator [Eugene D.] Milliken [of Colorado]: Mr. Secretary, it is the very essence of a communistic plan of sharing, and is worse than a communistic plan of sharing, because in Communism you share that which belongs to all; here you share that which the man has bought and paid for."

(Senate Committee on Agriculture and Forestry, *Hearings on the Food Supply of the United States*, Part 1, U. S. Government Printing Office, 1943, p. 31.)

<sup>74</sup> *Sharing Farm Equipment* (Farm Security Administration Publication No. 106, July 1942) was but one of the several relevant leaflets issued from Washington.

<sup>75</sup> The absence of significant achievements in this area was called to the attention of the Truman Committee in *Senate Hearings Investigating the National Defense Program*, Part 17, p. 6747. In its publication for employees, the Department of Agriculture admitted, albeit somewhat elliptically, that, "In 1942, examples of all-out co-operation (in the use of farm machinery) were the exception." (*U.S.D.A.*, April 27, 1943).

The sole substantial exception to this record of ineffectuality was the performance of the Farm Security Administration. Having been directed by the Secretary of Agriculture, as one of its basic wartime undertakings, "to help meet local deficiencies of equipment, machinery and services by organizing cooperative groups of small farmers for the joint purchase and use of essential production items,"<sup>76</sup> the Farm Security Administration assisted, in most cases financially, in the establishment of about 11,000 small cooperatives for the acquisition of such larger types of equipment as tractors, combines and peanut pickers.<sup>77</sup> Although the demand for such aid far outran available funds, and although the Farm Security Administration estimated, as the result of a field survey, that an additional 26,900 such co-operatives would enable some 267,000 farm families to achieve substantial increases in their production of urgently needed war crops,<sup>78</sup> the Agricultural Appropriation Acts of 1944 and 1945 "expressly prohibited F.S.A. from making loans to cooperative associations and from making loans to individuals to buy stock or other forms of membership interest in cooperative associations."<sup>79</sup> The agency nevertheless continued to encourage the formation of pooling arrangements, and even provided some direct assistance in the establishment of "informal and unincorporated" neighborly groups for the purpose of buying "equipment or blooded sires which none of [the participants] could afford to own and use individually."<sup>80</sup> It is indicative of the importance of adequate financial help in bringing proposals for increased sharing of equipment to fruition, however, that during the year following Congress' denial of funds for such purposes only 1,499 such "group services" were organized serving a mere 8,487 families, and that no more than 1,000 of the groups purchased agricultural machinery.<sup>81</sup> Also worthy of note is the fact that, inas-

76 "Directive from the Secretary of Agriculture to the Administrator of the Farm Security Administration," August 21, 1942 in *Senate Hearings on Agriculture Department Appropriation Bill, 1944*, p. 617.

77 U. S. Department of Agriculture, *Annual Report of the Farm Security Administration 1942-3*, mimeographed, p. 15.

78 Results of an unpublished field survey reporting the situation at the end of December, 1942.

79 From statement submitted by Frank Hancock, Administrator of the Farm Security Administration, in *House Hearings on Agriculture Department Appropriation Bill, 1946*, Part 2, p. 511.

80 U. S. Department of Agriculture, *Annual Report of the Farm Security Administration, 1943-4*, mimeographed, p. 9.

81 *Ibid.*

much as no provision was made for transferring such functions to other agencies, this legislative enactment actually served to bar the entire executive establishment from making further use of this most effective tool for increasing the utilization of available farm machinery.

#### 7. WARTIME COSTS OF SHORTCOMINGS IN THE MOBILIZATION OF FARM MACHINERY RESOURCES

Shortcomings in the mobilization of farm machinery resources placed major burdens on the war economy. The most obvious of these were the economic losses directly chargeable to the under-utilization of the equipment already on farms and to the diversion of scarce raw materials, manufacturing facilities and skilled manpower from more urgent military supply programs. In addition, significant losses may also have been generated by the encouragement derived by agricultural and industrial groups opposed to the further extension of mobilization measures from their successful efforts to reduce the weight given to mobilization considerations in the formulation of government policies relating to the production and utilization of farm machinery.

Secretary of Agriculture Wickard's revelation that 2,000 tractors require as much steel as a naval destroyer provided a dramatic index of the slowness of progress toward conversion, for during 1942, while the Navy Department was making the most desperate efforts to replace the heavy losses sustained at Pearl Harbor and to expand the nation's fleets to emergency proportions, and although farmers had already accumulated the largest supply of tractors in history, the number of new farm-type tractors produced came to 164,000.<sup>82</sup> Total agricultural machinery output in that year consumed well over one million tons of steel, more than two-thirds of a million tons of cast iron, and large quantities of other critical materials including rubber, tin, copper, lead and zinc.<sup>83</sup> This heavy drain on available supplies finally led to a demand by the Army-Navy Munitions Board on July 28, 1942 that, "the production of farm equipment . . . [be] drastically reduced . . . in view of the urgent requirements of raw materials for armaments."<sup>84</sup>

In view of the prevalence of acute shortages in the supply of most materials entering into the construction of agricultural equipment, gains

<sup>82</sup> *House Hearings on Agriculture Department Appropriation Bill, 1945*, p. 805. It was later estimated that the net gain in the number of tractors on farms during 1942 was 210,000. (*Agricultural Statistics—1946*, p. 582.)

<sup>83</sup> *Senate Hearings Investigating the National Defense Program*, Part 17, p. 7093.

<sup>84</sup> *Ibid.*, p. 7075.

by proponents of higher farm machinery quotas were necessarily scored at the expense of a broad array of other major components of the war economy. In January 1943, their efforts were described as entailing "heavy pressure on the War Production Board to pull steel away from guns and to put it into farm machinery."<sup>85</sup> At the end of March, the War Production Board issued an order on steel mills for emergency supplies to enable the South to get needed farm equipment in a hurry, and gave this directive priority even over the critical synthetic rubber and 100-octane fuel programs.<sup>86</sup> On May 11, 1943, the director of the WPB Steel Division was quoted as admitting that shortages had forced reductions in the third quarter steel allocations of 14 percent for the War Department, 20 percent for the Navy Department, 22 percent for the Maritime Commission, and 32 percent for the lend-lease program.<sup>87</sup> It was also reported that the inadequacy of steel supplies had forced reductions in the allotments for railroad equipment and for consumer "hard goods."<sup>88</sup> For that same quarter, however, the steel allocation to farm machinery producers was raised to more than double the quarterly rate originally announced for the 1943 program.<sup>89</sup> Under-Secretary of War Robert P. Patterson summarized the current situation shortly after the release of the newly-expanded farm machinery program with the warning that, ". . . there has been a definitely limited amount of critical materials allocated to the Army for the prosecution of the war. These allocations are less than our requirements."<sup>90</sup>

Allocations of steel for the production of farm machinery rose rapidly after the retreat from original curtailment objectives was initiated. During 1943, quarterly allocations rose from less than 200,000 tons at the beginning to 324,000 tons for the last three months, with the annual total again exceeding one million tons. Opposition to such increases was expressed strenuously and repeatedly by those concerned with fulfillment of

<sup>85</sup> *Business Week*, January 9, 1943, p. 5.

<sup>86</sup> *Business Week*, April 3, 1943, p. 34.

<sup>87</sup> The New York City newspaper *PM*, May 11, 1943.

<sup>88</sup> *Business Week*, June 12, 1943, p. 14.

<sup>89</sup> The allocation of 264,753 tons of steel for the third quarter fixed in connection with WPB Limitation Order L-257, issued on June 15, 1943, was itself more than twice the size of the quarterly rate of 127,274 tons envisioned by the original program for 1943. (*Senate Hearings Investigating the National Defense Program*, Part 17, pp. 7082-3) Actual allotments for the third quarter were estimated to have approximated 300,000 tons. (*Farm Machinery and Equipment Policies of the WPB and Predecessor Agencies*, p. 190.)

<sup>90</sup> War Department news release, June 26, 1943.



the military supply programs, but with indifferent success. Allocations during 1944 rose to 1,480,000 tons.<sup>91</sup>

Along with the consumption of significant quantities of critical materials, the continuance of high levels of farm machinery production also tied up manufacturing facilities and skilled manpower which could have been directed toward easing shortages in important war industries. The WPB Office of Civilian Supply estimated that its program for the reduction of farm machinery production in 1943, which was embodied in Limitation Order L-170, would have released 40,000 workers in the farm machinery plants alone—men already skilled in operating machine tools and other metal-working machinery and hence readily capable of turning to the production of tanks and other complex weapons and military goods. Had manpower savings been computed for the successively antecedent stages of production all the way back to the mining of ore, it was estimated that the total number whose energies would have been applicable to more urgent supply programs approximated 100,000 men.<sup>92</sup> Moreover, such adjustments would also have released a number of highly mechanized and efficiently organized plants admirably suited to the production of military requirements.

Proposals for the conversion of the farm machinery industry centered around three objectives: the reduction of total farm machinery production; the concentration of allowable output in a part of the industry's plants, which would operate at full capacity, while the remainder were completely freed for wartime tasks; and the simplification of wartime models of equipment in the interests of productive efficiency and economy of materials. Measures taken in respect to the first of these having already been recounted, attention will now be directed to the other two.

One of the earliest programs for dealing with these problems was the conversion plan issued shortly after Pearl Harbor by the CIO Farm Equipment Workers Organizing Committee, which included among its 12 recommendations the following: "consolidation of non-defense production in a smaller number of plants;" no further model changes except to conserve materials; elimination or curtailment of less important types of equipment; and increased supplies of raw materials for smaller companies.<sup>93</sup> A variety of suggestions were also formulated by officers of

<sup>91</sup> *Farm Machinery and Equipment Policies of the WPB and Predecessor Agencies*, p. 190.

<sup>92</sup> *Senate Hearings Investigating the National Defense Program*, Part 17, p. 7074.

<sup>93</sup> *Farm Machinery and Equipment Policies of the W.P.B. and Predecessor Agencies*, p. 38.

smaller companies in the industry, generally combining the idea of concentration with the proposal that all farm machinery production be turned over to the smaller plants, but also supporting some standardization and simplification of wartime models as a means of minimizing the resultant inroads on the equipment features which the larger companies had long promoted as unique attributes of their particular brands.<sup>94</sup> The first phase of the drive for a concentration program came to an end, however, with the finding by Philip Reed, then Chief of WPB's Bureau of Industry Branches, that the assumption that the smaller companies were not adapted to war work was unfounded and, hence, that action should rather be directed toward developing more effective means of dovetailing farm machinery production and new war output in all plants.<sup>95</sup>

The issue of concentration was returned to prominence during the spring and summer of 1942 as the result of a series of severely critical reports by WPB officials on the progress of conversion in the farm machinery industry and of insistent demands for remedial action by labor and small business representatives, and by officials of the War and Navy Departments as well as other government agencies.<sup>96</sup> Plan after plan was developed, debated, and then passed over as a result of irreconcilable differences between contending factions over the extent of concentration to be sought, the bases for shifting production, and the character of controls to be introduced to effectuate proposed ends.<sup>97</sup> The patchwork program which finally emerged after a number of inconclusive compromises effected under the pressure of an approaching deadline for issuance of the 1943 farm machinery program was distasteful to all of the parties to the controversy. By allocating only 30 percent and 20 percent, respectively, of contemplated production to the small and medium producers in the industry and leaving 50 percent for the seven major producers,<sup>98</sup> the concentration order was regarded as "half-hearted" or worse by staunch advocates of a far-reaching program along these lines. On the other hand, the opponents of the program predicted that it would increase costs of production, retard output, result in inferior machines, and force the bankruptcy of

<sup>94</sup> *Ibid.*, pp. 39, 45.

<sup>95</sup> *Ibid.*, p. 46.

<sup>96</sup> *Ibid.*, pp. 48, 49, 50, 78, 82.

<sup>97</sup> "Plan No. 1" was completed on August 3. "Plan No. 2" was completed on September 4. "Plan No. 3" was presented on September 16. "Plan No. 4" came up for discussion by the WPB Committee on Concentration of Production on October 1. After two subsequent sets of revisions, the latter was adopted as the basis for the concentration features of L-170. (*Ibid.*, pp. 81-86.)

<sup>98</sup> *Ibid.*, p. 89.

many dealers as well as of some manufacturers.<sup>99</sup> Many small producers seemed to feel that the complexities of the program offset the advantages of the slight differential increases granted to them. The report of the Truman Committee admitted the desirability of the objective sought but denounced the measures adopted as "impracticable."<sup>100</sup> As a result of such widespread opposition, as well as of operating difficulties, "the policies of . . . altering the production and distribution habits of the industry through concentration were largely abandoned in the spring of 1943."<sup>101</sup> It may be noted in this connection that a labor utilization survey by the War Manpower Commission reported that 38 percent of the workers in 66 farm machinery plants studied were engaged in the production of farm equipment rather than of more direct war goods on January 1, 1944, and that by March 1, this ratio had risen to 42 percent.<sup>102</sup>

The most far-reaching proposals relating to simplification, those calling for the concentration of all companies on the production of a common line of "victory models," never even reached the stage of serious consideration. Some progress was made in reducing the variety of models produced by each company, but only within the limits of voluntary cooperation as contrasted with the compulsory measures invoked during the previous world war.<sup>103</sup> Moreover, the net effect on the total materials requirements of farm machinery production was hardly perceptible, inasmuch as the materials saved by reducing the number of models being made were diverted to the manufacture of remaining categories of output.<sup>104</sup> Conservation gains reached significant proportions only in respect to the substitution of less critical materials for some of those which were in shortest supply. Shifts were made "from galvanized sheeting to painted sheet metal, from copper to steel, from chromium to molybdenum in cast iron and steel alloys . . . wood and ceramics [were substituted] for metal,

<sup>99</sup> *Ibid.*, p. 91.

<sup>100</sup> Senate Committee Investigating the National Defense Program, *Second Annual Report*, p. 174.

<sup>101</sup> *Farm Machinery and Equipment Policies of the War Production Board and Predecessor Agencies*, p. 123. In its *Third Annual Report*, issued March 4, 1944, the Truman Committee noted with apparent satisfaction that concentration features had been entirely eliminated under L-257 (p. 148.)

<sup>102</sup> *Ibid.*, p. 150.

<sup>103</sup> Irving Bernstein, *Farm Machinery: Demand and Supply, Price, and Governmental Regulation, 1917-18*, History Study No. 28, Bureau of Labor Statistics, mimeographed, 1942, pp. 16-18.

<sup>104</sup> *Farm Machinery and Equipment Policies of the War Production Board and Predecessor Agencies*, p. 57.

iron rims for rubber tires, steel-backed bearings for solid bronze."<sup>105</sup> Most of these adjustments were the product either of official material conservation orders or of the sheer necessity to make the most of sharply curtailed allocations.

Fuller utilization of the available equipment on farms would not only have made possible the release of manufacturing facilities, manpower and materials for other urgent wartime production tasks but would also have permitted reductions in the agricultural labor force as a means of easing manpower deficits elsewhere. Wider sharing of available equipment would also have been advantageous to farmers by reducing the cost of employing expensive farm machinery. In addition, political and economic returns of outstanding importance would have materialized from the resultant capacity to allocate substantially greater quantities of agricultural equipment for export to liberated areas.

The repeated and vehement attacks made on the continuance of farm machinery exports during the war warrant some brief focussing of attention on the scale and purposes of such shipments.<sup>106</sup> There can be no denying the critics' contention that the termination of such overseas aid would have further expanded the supply of new machinery available for domestic purchase. A fuller consideration of mobilization objectives, however, counseled against so narrow a formulation of the issues. By sending farm machinery in lieu of crops and livestock products to meet part of the food deficit of friendly countries, it was possible not only to conserve precious shipping space but also to ease the current and continuing burden on domestic resources by teaming American machinery with foreign land, labor and other facilities to produce food which might otherwise have had to be produced wholly in this country.<sup>107</sup> This consideration, together

<sup>105</sup> *Ibid.*, p. 55.

<sup>106</sup> For example, see the statement by Representative H. Carl Andersen of Minnesota (*Congressional Record*, November 12, 1943, p. 9562), and also the call for an investigation of the farm machinery situation with special attention to exports made by Senators Guy M. Gillette of Iowa and Bennett Champ Clark of Missouri in Senate Resolution 276, which was approved on March 24, 1944.

<sup>107</sup> In this connection, one may note that more than three-fourths of our total exports of agricultural equipment during the three and one-half years ending June 30, 1944 went to the embattled British Empire. Other important recipients included French North Africa and the Latin American republics, which were helping to meet the war requirements of the United States. Despite this over-riding emphasis on applications contributing to the allied war effort, only one-fourth of the shipments were made on lend-lease account. (*House Hearings on Agriculture Department Appropriation Bill, 1946, Part 2*, pp. 37, 96-99.)

with the urgency of speeding the economic rehabilitation of liberated areas, actually recommended the progressive expansion of United States exports of farm equipment and supplies in accordance with Allied advances in Europe and in the Far East if food requirements from this country were to be held to minimum levels.

During 1937-40, exports accounted for an average of 13.5 percent of the total value of new farm equipment, attachments and parts sold in the United States.<sup>108</sup> Instead of the substantial increase in this proportion implied by mounting criticism, the ratio of overseas shipments to the total actually declined to an average of 11.2 percent during 1943-45, the very period when foreign requirements were being raised most rapidly as a consequence of allied military advances.<sup>109</sup> It may be of interest to note further at this point that in 1946, when the American people and the government were more deeply concerned with acute food shortages abroad than ever before, exports dropped to only 9.6 percent of the total value of new farm equipment, attachments and parts sold in the United States.<sup>110</sup>

From the standpoint of national mobilization, the need for additional farm machinery production during the war should have been gauged by the putative contribution of such increments to further expanding the production of needed agricultural products. As it happened, however, remarkably little direct attention was paid to this criterion in the arguments advanced by proponents of greater equipment output. Perhaps the closest approximations to such an approach were the early efforts to justify demands for larger farm machinery quotas by first claiming that serious reductions had taken place or were in prospect with respect to supplies of farm labor and draw-bar motive power and by then jumping to the conclusion that agricultural production would decline unless such deficits were offset by the manufacture of additional new equipment. Although their campaigns met with success, it may be observed that these claimants failed to justify either their basic premises or their cavalier disregard of the potentials of a well-rounded and vigorous program to promote the fuller utilization of equipment already on farms. At the same time, even this approach represented significant progress toward thinking of farm machinery requirements within a framework of mobilization considerations as compared with the intransigent demands voiced by several producers

108 *Agricultural Statistics—1946*, p. 584.

109 Bureau of the Census, *Farm Machines and Equipment: 1946*, mimeographed, May 9, 1947, p. 4. Actual percent going to exports: 1943—11.3; 1944—10.5; 1945—11.9.

110 *Ibid.*

at the first official meeting of the industry advisory committee, only ten days after Pearl Harbor, that farmer demand be recognized as equivalent to "need," and hence that farmers be allowed to buy as much machinery as they could afford.<sup>111</sup>

New bases for justifying the further relaxation of farm machinery production limitations came into increasing prominence during 1943 and 1944, marking further departures from mobilization precepts. For example, early in 1943 Department of Agriculture representatives on the WPB allocations committees began to lay great stress on psychological considerations, claiming specifically that a rejection of farmers' requests for more machinery would undermine their morale by minimizing the importance of food production in the war effort. Later on, support for larger quotas was sought through the claim that the use of farm machinery resulted in the saving of more manpower than was required for its production, as though such a claim were unique in the machinery industries, and as though such a contention were of determining significance in the allocation of available facilities and manpower among competing war production programs. The last vestiges of mobilization considerations disappeared during the spring of 1944 as upward revisions in quota were being increasingly demanded (and, in time, granted) whenever a plant claimed to be able to exceed the quota assigned to it.

Behind the changing facade of arguments and appeals, the pressure to raise farm machinery production was unremitting. No sooner had the expanded L-257 program been issued in mid-1943 than the *Wall Street Journal* was reporting that although the new farm machinery program would allow 80 percent of 1940-41 production, "farm spokesmen in Congress claim that actual needs for this year and next are 129 percent of the 1940-41 base . . . [and that] while more than double the 1943 allotments, the 1944 tractor quota of 149,729 of all types . . . was 24,729 below estimated minimum requirements of county boards."<sup>112</sup> Raising the sights even higher, but without presenting any factual support for his claim, War Food Administrator Marvin Jones declared in February 1944 that, "New machinery at roughly 80 percent of 1940 production will meet only about half the needs of farmers."<sup>113</sup> It will be recalled from Table 26 that domestic purchases of tractors and other agricultural machinery by farmers in 1944 came to 143 percent of the 1940 level and that the volume

111 *Farm Machinery and Equipment Policies of the War Production Board and Predecessor Agencies*, pp. 35-36.

112 *Wall Street Journal*, July 2, 1943.

113 *Food Program for 1944*, p. 59.

of tractors and all other machinery on farms at the beginning of 1945 was half again as large as a mere 5 years earlier. Nevertheless, on May 11, 1945, War Food Administrator Jones included among his foremost recommendations to Clinton P. Anderson, then chairman of a special subcommittee of the House of Representatives investigating food shortages, that, "Farm machinery should have top priority as it is more critical now than at any time during the war."<sup>114</sup>

Although the justifications adduced in support of expanding the wartime production of farm machinery have been found wanting, the persistence and intensity of the campaign invites some exploration of the motivations generating it. To farm machinery producers and distributors, the normal considerations of servicing a profitable market were of undoubted importance, and, especially during the early years of the period under review, there was ample precedent for resisting prompt and thorough conversion in the behavior of other industries facing similar government demands. During the latter half of 1943 and thereafter, tacit official recognition of farm machinery as one of the most important of wartime requirements provided additional incentive and sanction for manufacturers to press with utmost vigor not only for the fulfillment of materials allocations promised by the War Production Board but for the fullest possible utilization of their productive facilities as well.

Farmer support of efforts to enlarge farm machinery production had several roots. Their expanded purchasing power combined with their deep-seated longing to improve their productive facilities, long the despair of wives intent on increasing the comforts of rural living, might have been sufficient cause alone to ensure farmer advocacy of more generous quotas. Indeed, wartime experience tended to confirm the conclusion of a report published by the Department of Commerce at the very close of the period of peace that, "Whatever the farmer's need for equipment in any normal year, his purchases are closely related to the amount of income he has to spend, and it is difficult to measure his requirements in other terms. Farm equipment sales in the past have varied with farm income, without affecting agricultural production from year to year in any manner that can be measured."<sup>115</sup> In addition, however, the almost incessant clamor about threatened farm labor shortages, reinforced by the seemingly vacillating if not actually confused national manpower program, led many to regard additional machinery holdings as the only available safeguard against

<sup>114</sup> U. S. Department of Agriculture news release, May 11, 1945.

<sup>115</sup> *Domestic Commerce*, December 11, 1941.

what appeared to be the imminent risk of a catastrophic shortage of "hands." Further interest was dictated by the fact that rising costs of farm machinery, equipment and operating supplies were far overshadowed by the spectacular rise in average farm wage rates, leaving a substantial differential in favor of increased mechanization on many types of farm enterprises.<sup>116</sup> Mention should also be made of the fact that relatively little progress was achieved toward reducing farmer demand for more machinery by devising and actively encouraging the adoption of practicable arrangements for sharing such machinery as was already available.

Opposition to changes in the allocation of new farm equipment was actually fostered in part by the apparent reluctance of the War Food Administration to press energetically for changes from peacetime agricultural practices—whether with respect to the acreage brought under cultivation, or with respect to shifts from less essential to more essential crops, or with respect to encouraging the redistribution of available farm labor resources—in consequence of which past patterns of farm machinery distribution and utilization were reinforced.

In probing for the reasons why the Department of Agriculture and the War Food Administration joined in demands for additional farm machinery, the following suggest themselves for consideration: First, having either through conscious choice or through caution and ineffectuality failed to bring to realization the rich potentials for expanding needed output available through the re-allocation of resources among different agricultural enterprises and through sharply increasing the utilization of available resources, the only residual means of effecting required increases were through greater allocations of labor, machinery and other factors of production. Second, inasmuch as their agencies were commonly regarded as advocates of the agricultural viewpoint, particularly on matters involving differences with other sectors of the economy, officials of the Department of Agriculture and of the War Food Administration may have felt that only an aggressive pursuit of maximum returns would ensure agriculture a fair share of the allocations resulting from the adjudication of inter-agency conflicts. Third, in view of the necessary sensitivity of major government officials to Congressional reactions, the severe disapproval of farm machinery production limitations expressed by a wide array of influential legislators may well have been considered a mandate

<sup>116</sup> *Report of the Secretary of Agriculture, 1945*, p. 73. From 1940 to 1945, the index of prices paid by farmers rose 16 percent in respect to farm machinery, 29 percent in respect to equipment and supplies, and 175 percent in respect to labor (i.e., wage rates). (*The Farm Cost Situation*, March 1947, inside cover page.)



for pressing agricultural claims with even greater energy. Fourth, there was little evidence of clear-sighted, well-organized, and politically potent efforts pressing vigorously for all-out mobilization, and hence helping to offset the pressures generated by those resisting conversion.

Although the foregoing considerations help to explain the course of actual happenings, they do not disprove the contention based on a variety of other wartime experiences that the obstacles to a more effective mobilization of farm machinery supplies as well as of the facilities for producing such equipment might have been overcome by a vigorous and carefully balanced program of incentives to co-operation, compensation for losses, insurance against hazards, and frank and widespread dissemination of the facts about war needs and about the obstacles in the way of their fulfillment.

In summarizing this discussion of the mobilization of farm machinery resources during the war, four conclusions may be highlighted:

1. The case for expanding farm machinery production was relatively weak and unconvincing in comparison with competitive claims for the same manufacturing facilities, labor and materials — yet production quotas were raised sharply and repeatedly.
2. Equipment already on farms was poorly distributed from the standpoint of war needs—yet corrective measures were extraordinarily limited in comparison with the energetic efforts made to raise quotas on new production.
3. Although most equipment on farms was under-utilized to an extreme degree, no adequate program of active leadership, incentives and financial assistance was introduced to minimize this vast waste—in fact even the Farm Security Administration's restricted efforts to aid the establishment of machinery co-operatives were brought to a halt.
4. Because of these failures to gear farm machinery policies and programs into the ordering of needs and priorities dictated by the nation's war plan, urgently needed raw materials, skilled manpower and major manufacturing facilities were diverted from more urgent sectors of the war effort during the very peak of our mobilization crisis.

One can hardly avoid the conclusion that more effective use was made of the need for expanding food output in the interests of expanding farm machinery production than was made of the resulting equipment in the interests of fulfilling the most urgent of our agricultural deficits. Nevertheless, it would be erroneous to conclude from the foregoing that the labor, materials and manufacturing facilities devoted to the production of new farm machinery represented a total loss to the war effort. The new

equipment which was added to the enormous supply already on farms undoubtedly contributed to the impressive gains registered in the productivity of farm labor.<sup>117</sup> That similar gains might have been achieved by other means, more economical of precious war resources, in no way denies the significance of this contribution; it merely highlights once again the high costs of indulgence toward the inertia and the pursuit of narrow self-interest which impaired the effectiveness of agricultural mobilization.

117 According to one careful estimate, increased mechanization accounted for about one-fifth of the reduction in man-hour requirements per unit of agricultural production which was achieved between 1939 and 1944. (Barton and Cooper, *op. cit.*, p. 47.)

## CHAPTER VIII

### FERTILIZERS

FERTILIZERS contribute to the preservation of the nation's soil resources and to the improvement of the nutritional content of farm products. But even these valuable offerings were overshadowed from the standpoint of agricultural mobilization by the capacity of fertilizers to effect substantial increases in crop yields and thereby to expand the volume of farm output per unit of land, labor and machinery.

That the replenishment of plant nutrients in the soil would improve crop harvests had been common knowledge for so long that American agriculture was generally considered to be realizing these potentials with reasonable thoroughness. This was far from true, however, even at the highest levels of fertilizer consumption reached prior to the war. Outstanding advances were achieved during the period of hostilities, with rich benefits to the economy. Heavier applications of plant foods are estimated to have accounted for almost one-third of the wartime rise in average crop production per acre.<sup>1</sup> Moreover, by expanding the crop yield associated with a given expenditure of labor in pre-harvest field work as well as in tending harvesting machinery, greater fertilizer consumption was also responsible for reductions in the total annual man-hour requirements of agricultural production estimated at more than 250 million man-hours.<sup>2</sup> Nevertheless, the extent of these gains, too, was unduly limited in comparison either with needs or with practicable potentials. More important still, the inadequate integration of fertilizer policies into a comprehensive program for maximizing the production of needed foodstuffs served to further limit U. S. capacity to fulfill the unsurpassed requirements of its allies and of liberated areas.

#### I. THE FERTILIZER SITUATION PRIOR TO THE WAR

Annual consumption of the major plant foods—nitrogen, phosphoric acid and potash—was more than quadrupled in the United States between 1900 and 1940, as shown in Table 27. Despite such rapid expansion, however, the rate at which plant nutrients were being replaced remained far short of the rate at which they were being removed from the soil by exhaustive cropping systems, by soil erosion and by the seepage of moisture from the topsoil.

<sup>1</sup> Barton and Cooper, *op. cit.*, p. 36.

<sup>2</sup> *Ibid.*, pp. 46-47.

TABLE 27

ANNUAL CONSUMPTION OF PLANT FOODS, BY DECADES 1900-1930, ANNUALLY 1930-40<sup>1</sup>  
Thousands of Tons

Year	Nitrogen	Phosphoric Acid	Potash	Total
1900 .....	62.0	246.2	86.5	394.7
1910 .....	145.9	499.2	211.0	856.1
1920 .....	227.8	660.1	257.5	1,145.4
1930 .....	376.6	792.8	353.8	1,523.2
1931 .....	300.9	610.9	274.7	1,186.5
1932 .....	213.6	412.9	191.6	818.1
1933 .....	240.2	463.5	222.3	926.0
1934 .....	275.3	529.5	262.7	1,067.5
1935 .....	311.8	597.3	306.6	1,215.7
1936 .....	350.4	672.8	350.1	1,373.3
1937 .....	411.5	793.9	416.0	1,621.5
1938 .....	384.1	743.7	393.4	1,521.2
1939 .....	398.2	789.4	409.1	1,596.7
1940 .....	419.1	912.3	435.0	1,766.4

<sup>1</sup> Including Hawaii, Puerto Rico, and government-distributed fertilizers.

Source: A. L. Mehring, Hilda M. Wallace, and Mildred Drain, "Nitrogen, Phosphoric Acid, and Potash Consumption in the U.S., by Years and by States, with Preliminary Figures for 1944," *Journal of the American Society of Agronomy*, August 1945, p. 597.

Plants cannot live without nitrogen, phosphorus, potassium and certain other elements. Given inadequate quantities of these essential foods, plants are under-nourished and fail to grow and produce normally, with resultant harm to the farmer's income, the nation's food supply and the healthfulness of the consumer's diet. It is all the more imperative to realize, therefore, that in spite of the remarkable advances which have been made in scientific understanding of what nutrients are needed to preserve and to rebuild soil fertility and of how such supplements can most effectively be reintroduced into the growing process, this country never for a single year in recent decades succeeded in arresting the net annual draining away of one of its most precious natural resources, the productive capacity of its agricultural lands.

Annual losses of nitrogen from the soil in the United States were estimated in 1936 to exceed all additions made by more than 40 percent.<sup>3</sup> Field research has demonstrated that low crop production is more often due to the lack of phosphorus than to any other plant food deficiency; yet the amount of phosphorus used on American farms in 1937 was only a small fraction of that which was needed.<sup>4</sup> In regard to the application of

<sup>3</sup> O. Schreiner and B. E. Brown, "Soil Nitrogen," *Yearbook of Agriculture*, 1938, U. S. Government Printing Office, 1938, p. 372.

<sup>4</sup> W. H. Pierre, "Phosphorus Deficiency and Soil Fertility," *ibid.*, pp. 377, 380, 396. A balance sheet of losses and replacements of phosphorus in the soils of the U. S. prepared for the year 1930 estimated that the total additions of phosphorus through fertilizers, manure, seeds and unharvested crops equaled only about one-third of annual losses. (*Ibid.*, p. 384.)

lime, which is necessary to control soil acidity, studies revealed that even in 1936, when lime consumption reached a new peak, the average dressing per acre in the midwest, then currently absorbing 75 percent of the national supply, came to only 27 lbs. of calcium oxide in comparison with annual losses estimated at 50-250 lbs.<sup>5</sup>

Other developments, including improved plant varieties, made possible continued increases in the productivity per acre of most crops, but every loss in soil fertility had the effect of reducing the efficiency with which applications of land, seed, labor and machinery could be converted into needed foods.

### *Fertilizer Consumption and Farm Income*

Peacetime fertilizer consumption fell short of soil requirements and even of the levels which offered profitable increments in crop yields. This resulted primarily not because of supply limitations but because of income inadequacies and uncertainties.

During the inter-war period, the development of synthetic plant foods, the carry-over of nitrate capacity from the production of explosives during the first World War, the establishment of a domestic potash industry and the expansion of the American chemical industry, all contributed to a vast increase in supply potentials, to a reduction in fertilizer prices,<sup>6</sup> and to a lessened reliance on foreign imports. In the case of potash, for example, the U. S. had imported more than 90 percent of its requirements in 1923, whereas in 1940 the potash content of our exports almost equalled the potash content of our imports despite the fact that domestic consumption had risen to record levels.<sup>7</sup> Considerable progress had also been achieved in expanding the domestic production of nitrate fertilizers, so that although South American imports continued to provide most of our nitrate of soda, a heavy import deficit of ammonium sulphate had been converted into a substantial export balance by 1940.<sup>8</sup>

The dominant effect of farm income on the consumption of commercial plant foods has been demonstrated by studies revealing that, "variations in farm income accounted for at least 90 percent of the variation in

5 Emil Trug, "Soil Acidity and Liming," *ibid.*, pp. 566-69.

6 Index numbers of the prices paid for fertilizers by farmers (1939 = 100) declined from an average of 175 during 1919-21 to 126 during 1922-30 and further to 101 during 1931-39. (*The Farm Cost Situation*, March 1947, inside cover page.)

7 O. Schreiner, A. R. Merz and B. E. Brown, "Fertilizer Materials," *Yearbook of Agriculture*, 1938, p. 491.

8 *Agricultural Statistics—1942*, p. 684; *Agricultural Statistics—1939*, p. 572.

the expenditures for fertilizer in the period 1911 to 1943."<sup>9</sup> Further evidence that fertilizer consumption was not being limited by supply stringencies is provided by the fact that although supplies could readily have been raised well above the level made available and sold in 1930, annual consumption of commercially distributed fertilizers during 1931-39 averaged only 79 percent of the 1930 record, and failed to equal the latter even once.<sup>10</sup>

The manifest financial inability of farmers to cope with this growing danger to our agricultural resources finally led the Federal government to offer direct grants of materials to enable "small farmers, farmers not able to buy materials and finance themselves, to adopt practices of applying limestone<sup>11</sup> and fertilizer and to use certain legume seeds not commonly used."<sup>12</sup> Beginning in 1937 with the distribution of 25,000 tons of triple superphosphate produced by the Tennessee Valley Authority, the fertilizer segment of this "aid-in-kind" program grew rapidly. By 1941 it was costing \$28 million and distributing the equivalent of 800,000 tons of 20 percent superphosphate<sup>13</sup> in addition to 7.2 million tons of liming materials, more than the entire country had used in 1936.<sup>14</sup>

9 U. S. Department of Agriculture, *Fertilizers and Lime in the U. S.*, Miscellaneous Publication No. 586, U. S. Government Printing Office, 1946, pp. 30-32. More specifically, it was found "that 56 percent of the deviations in expenditures for fertilizers from the average may be accounted for by similar fluctuations in farm income from crops plus government payments in the previous year, 28 percent by similar fluctuations in the same year's income, and 9 percent by changes in the proportion of the previous year's income remaining after expenses of production are deducted." (Quoted from A. L. Mehring, "Expenditures for Fertilizer in Relation to Farm Income," *Better Crops with Plant Food*, Vol. 28, No. 8, p. 10, 1944, by the National Planning Association's *Fertilizers in the Post War National Economy*, Planning Pamphlet No. 42, Washington, February 1945, p. 21.)

10 *Fertilizers and Lime in the U. S.*, p. 81.

11 "...when lime has been cheaply and easily obtainable through special agencies, farmers have used it in amounts approximating those needed... In Wisconsin the use was low and the rise in consumption slow until the mining and grinding of liming materials was taken up by various work-relief programs, starting in 1934. This made cheap lime for agricultural purposes a reality for the first time in the history of the State. The effect was like magic. It immediately increased the consumption five or six times..." (E. Trug, "Soil Acidity and Liming," *op. cit.*, pp. 564, 566-7.)

12 Testimony of William G. Finn, Acting Chief of the Agricultural Adjustment Agency, *House Hearings on Agriculture Department Appropriation Bill, 1944*, p. 1601.

13 See table of Federal grants of fertilizer for conservation in *House Hearings on Agriculture Department Appropriation Bill, 1944*, pp. 1605-6.

14 The total consumption of liming materials in the United States, in million of tons, was as follows: 1933-1.6; 1934-2.4; 1935-3.3; 1936-6.3. (*Agricultural Statistics—1942*, p. 685.)

*Geographical Distribution*

Fertilizer consumption has long been extremely uneven regionally, partly because of differences in soil properties, partly because of differences in crop specialization, partly due to the momentum of past habits, and partly in response to unequal changes in income.

The persistence of habitual fertilizer practices, despite contrary scientific knowledge, served as a double source of waste, sometimes leading to excessive dosages and sometimes restricting them far below actual requirements. Maintenance of traditional levels of fertilizer applications has resulted, for example, in growing accumulations of phosphorus in the soils of such heavy consuming areas as the old tobacco fields of Connecticut, the vegetable growing district of Eastern Virginia and the citrus belt of Florida.<sup>15</sup> On the other hand, attention has been called to the fact that, "experimental work done during the last 15-20 years has definitely established the need for phosphorus fertilizer in the Great Plains region, and . . . that in some cases a greater response to a given amount of phosphorus fertilizer is obtained in this region [where almost none is used] than in the Eastern States."<sup>16</sup>

Not only did about 90 percent of all fertilizers sold during the decade prior to the war go to farms east of the Mississippi River, as shown in Table 28, but six states—North Carolina, South Carolina, Georgia, Florida, Alabama, and Mississippi—consistently absorbed half the national total. Perhaps still more provocative from the standpoint of promoting a more efficient use of available supplies was the fact that North Carolina alone consumed more fertilizer during the period 1930-1940 than all twenty-four of the North Central, Mountain and Pacific Coast States combined.

Some index of the possible variability in fertilizer consumption under emergency conditions was provided by the impact of the 1932 depression. Consumption for the country as a whole declined by 47 percent, and even such major consumers as North Carolina and South Carolina reduced their takings by 43 percent. The belt of major cotton-producing states stretching from Georgia to Texas actually reduced purchases by more than two-thirds.<sup>17</sup> That period of economic hardship and wasted resources

15 W. H. Pierre, "Phosphorus Deficiency and Soil Fertility," *op. cit.*, p. 393. According to this source, it has been estimated that at least one-half of the phosphorus spread on Connecticut tobacco fields is unnecessary.

16 *Ibid.*, p. 379.

17 Total fertilizer consumption of Georgia, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas dropped from 2,463,000 tons in 1930 to 750,000 tons in 1932. (*Agricultural Statistics—1942*, p. 687.)

certainly could not have been used as a guide for planning possible re-adjustments in the peace-time utilization of fertilizer supplies. But its outline of the degree of sacrifice accepted by farmers for reasons less compelling than the national security does suggest how enormous were the practical margins within which the regional reallocation of scarce fertilizer supplies might have been pressed in the interest of fully mobilizing our productive resources.

TABLE 28

FERTILIZER CONSUMPTION BY REGIONS AND MAJOR CONSUMING STATES, 1930-1940

Thousands of Tons

Region	1930	1932	1935	1940
North Atlantic .....	1,178	913	1,009	1,219
North Central .....	920	444	743	1,042
South Atlantic .....	4,123	2,353	3,286	3,741
North Carolina .....	1,242	696	1,000	1,077
South Carolina .....	749	446	614	685
Georgia .....	929	357	617	763
Florida .....	489	381	418	569
South Central .....	1,812	511	1,007	1,549
Alabama .....	644	205	422	576
Mississippi .....	404	85	214	320
Mountain and Pacific .....	188	163	228	288
United States .....	8,221	4,384	6,273	7,839

Source: *Agricultural Statistics—1942*, p. 687.

In seeking for an explanation of these regional diversities, it is apparent that dissimilarities in soil requirements were a major factor. Plant food needs vary quite markedly with soil types, the adequacy of past conservation practices, and with crop specialization. The mere fact that some soil groups contain five to ten times as much nitrogen, phosphorus or potassium as others alone insures inequality of fertilizer requirements, especially if they are to produce similar crops.<sup>18</sup> In addition, however, every rural community in the country bears witness to the variations in soil fertility that have been wrought within the same soil areas by the care and industry or by the poverty or neglect of those who worked the land in past decades. Nor is there any lack of evidence to show that some crops

<sup>18</sup> For example, the Prairie and Chernozem-like soils of the Midwest contain about four times the nitrogen per acre that is found in the Red and Yellow soils of the Old Cotton Belt. (*Yearbook of Agriculture*, 1938, p. 366.) In regard to phosphorus, the Grey-Brown Podzolic soils of Indiana and Ohio are more than seven times as well provided as certain sections of North Carolina, South Carolina and Georgia. (*Ibid.*, p. 381.) Within New Jersey itself, Merrimac loam has nine times as much potash in the plow layer of its topsoil as Lakewood Sand, and in adjoining New York State one of the soil types has more than 20 times as much potash per acre as Lakewood Sand. (*Ibid.*, p. 398.)



are more exhaustive of soil resources than others, partly because of their direct removal of nutrients in the harvested plant,<sup>19</sup> and partly because of their effect on the rate of soil erosion.<sup>20</sup>

Unchanging as are the physical effects of these determinants of soil requirements, several factors contrived to make their influence on fertilizer consumption wholly different during the years of peace than would be either necessary or desirable in a war emergency.

The incentive to augment yields by utilizing fully the potentials offered through heavier applications of fertilizer was blunted previous to 1933 by huge crop surpluses and low cash incomes. Regional crop adjustments in accordance with differential soil advantages and in the interest of progressively reducing submarginal production were both obstructed by the absence of reasonably attractive employment alternatives. The redistribution of fertilizer consumption among crops, so as to maximize the nation's production of nutrients and needed fibers for every pound used, could not but be a matter of practical indifference so long as fertilizer supplies were unlimited and so long as the food value harvested per unit of resources continued to have no significant relation to farm income per unit of production costs.

Thus for years fertilizers were but one of a variety of tools employed in a great defensive campaign by many farmers to minimize economic uncertainty by clinging to traditional crops and by compensating for the natural deficiencies of their holdings by willingly assuming the higher costs and lower net returns of more intensive production efforts in preference to hunting wholly new sources of employment. Millions of tons of fertilizers were thrown into a vain effort to offset the basic soil deficiencies of large areas and thus continue them in competition with others better endowed. Moreover, by being applied in inadequate amounts to already depleted fields as a means of raising the productivity of sub-marginal farms to barely marginal levels, additional millions of tons were so employed as to produce the paradoxical effect of further exhausting our national soil resources.<sup>21</sup>

19 The nitrogen content of harvested crops per acre comes to 190 lbs. in the case of alfalfa, 124 lbs. for cowpeas, 118 lbs. for sugar-beets and about 100 lbs. for cabbage and corn. (*Ibid.*, p. 371.) The removal of potash in harvested crops equals 125 lbs. per acre in the case of sugar beets, 100 lbs. for alfalfa, 90 lbs. for turnips and 78 lbs. for tobacco. (*Ibid.*, p. 399.)

20 "Where corn was grown continuously on land of 3.7 percent slope, more phosphorus was lost by erosion in one year than is found in a 75-bushel crop of corn." Erosion loss where wheat was grown continuously was only half as great. (*Ibid.*, p. 383.)

21 In the case of phosphorus, for example, Dr. Pierre pointed out that, "much time, effort and money is now being spent in an attempt to produce crops on land too low in

Not until the Federal farm programs were introduced was this pressure to trade soil resources for income somewhat eased. The techniques employed by these programs were directed toward the limited objective of securing only whatever gains were possible within the existing geographic pattern of cash crop production and within the economic balance requirements of each farm. Nevertheless, by restricting the acreage of soil-depleting crops which were also in surplus supply, and by subsidizing the planting of more soil-building and soil-protecting crops, the introduction of better tillage and drainage practices and greater consumption of fertilizers and lime, progress was initiated toward the more efficient utilization of soil resources.

### *Consumption by Crops*

A review of differential consumption by major crops will help to round out this picture of the fertilizer situation prior to the war. As Table 29 reveals, the distribution of fertilizers was almost as sharply concentrated among crops as among states. Cotton, corn, potatoes, wheat and tobacco together absorbed more than two-thirds of all fertilizers used during the period 1924-36. Oats, citrus fruits, apples, sweet potatoes and tomatoes consumed an additional 13 percent, while the next ten heaviest consuming crops together accounted for only about 5 percent more of the total.

TABLE 29

RELATIVE DISTRIBUTION OF FERTILIZER BY CROPS, SELECTED YEARS DURING 1924-36

Crops	1924	1928	1932	1936	Relative index of average fertilizer used per acre <sup>1</sup>
	%	%	%	%	
Cotton .....	28.6	29.7	19.6	19.9	545
Corn .....	21.3	20.1	20.2	22.5	165
Potatoes .....	8.3	8.1	10.4	7.4	2120
Wheat .....	7.9	6.3	7.5	10.1	100
Tobacco .....	6.7	7.8	5.8	6.2	3365
Oats, citrus fruits, apples, sweet potatoes and tomatoes .....	11.5	11.8	16.2	14.1	....
Peanuts, peaches, cabbage, sweet corn, watermelons, snap beans, celery, sugar cane, asparagus, lettuce ....	4.7	5.1	6.7	6.2	....
Other crops .....	11.0	11.1	13.6	13.6	....
Total .....	100.0	100.0	100.0	100.0	

<sup>1</sup> Index of fertilizer used per acre is the average for 1924, 1928, 1932 and 1936. Actual average for wheat is 16 pounds per acre.

Source: *Agricultural Statistics—1941*, p. 698.

available phosphorus to make production economical. From the standpoint of the future welfare of the country, such production is actually detrimental, for it means large losses of topsoil by erosion." (*Yearbook of Agriculture—1938*, p. 396.)

Computation of total consumption on a "per acre" basis reveals an extreme range in the intensity of fertilizer applications even among the five largest users. Cotton fields received more than five times the average dosage per acre commonly applied to wheat. Topping all major crops, tobacco production absorbed more than 20 times as much fertilizer per acre as did corn. These relations are suggestive of possible adjustments whereby, when conditions so warranted, food production might have been materially expanded even in the face of limited fertilizer supplies.

Differentials in fertilizer consumption among crops are the product of the same inter-acting factors of habit, purchasing power, soil type, inherited soil fertility and direct crop requirements which were found relevant to the geographical pattern of fertilizer distribution.

The direct physical consumption of plant foods varies distinctly among crops, but to far too small a degree to account for the extreme range in fertilizer requirements already noted. In the course of their growth, cotton plants, for example, remove less nitrogen and only one-fifth more potash per acre from the soil than corn plants, yet cotton growers apply more than three times as much fertilizer per acre.<sup>22</sup> The powerful effect of changes in purchasing power is well illustrated by fertilizer consumption in tobacco areas: fertilizer dressings per acre declined by almost one-half between 1928 and 1932, while cash income from tobacco production dropped 53 percent; between 1932 and 1936, fertilizer dosage per acre rose to 90 percent of 1928 levels, while cash income increased to 98 percent of 1928.<sup>23</sup>

Perhaps the simplest means of summarizing the scale of consumption differentials resulting from the interplay of these various factors would be to focus on the pattern of use of some one category of plant food, in some one year, among the producers of one common crop. Although corn has been regularly grown in all 48 states, most of the harvested acreage has been concentrated in the Corn Belt and in the region south of and including North Carolina, Kentucky, and Oklahoma. Total applications of nitrogen on corn land in Iowa and Illinois averaged less than one-twentieth of a pound per harvested acre in 1942, in contrast with an average in excess of 16 pounds per acre in North and South Carolina. Corn yields, on the other hand, were three times as great per acre in the north-

<sup>22</sup> Harvested crops remove the following amount of potash per acre: wheat—21.0 lbs., corn—27.6 lbs., cotton—32.2 lbs., potatoes—45 lbs., and tobacco—78.0 lbs. In regard to nitrogen, the volume removed per acre of harvested crops is: potatoes—45 lbs., wheat—51.5 lbs., tobacco—67 lbs., cotton—68 lbs., and corn—96 lbs. (*Yearbook of Agriculture*—1938, pp. 371, 399.)

<sup>23</sup> *Agricultural Statistics*—1939, p. 482; *Agricultural Statistics*—1941, pp. 537-38, 698.

ern pair of States. In short, farmers in the Carolinas used more than 600 times as much nitrate fertilizer per bushel of corn in that year as did the growers in Illinois and Iowa.<sup>24</sup>

These findings cannot, of course, be interpreted to mean that still heavier applications of fertilizers in the north would continue to be repaid with such extraordinary bounty. They do suggest, however, that in the perspective of mobilizing for national defense, it might have been found desirable to plan for the production of a greater proportion of the nation's corn and other crops in the areas best adapted to their production; and also to plan the diversion of a larger share of available fertilizer supplies for the further enhancement of yields in the relatively most responsive areas.

Summarized briefly, the following appear to have been the most significant fertilizer developments during the inter-war period:

1. Despite a long continuing trend toward heavier fertilizer use, the rate of consumption in the U. S. remained far too small either to compensate for the annual losses of plant nutrients from the soil or to fully realize the potential increments in crop yields available from optimum fertilizer applications.
2. Domestic production of fertilizers was expanded so much more rapidly than consumption as to reduce our reliance on foreign sources.
3. The dominant factor tending to restrict fertilizer consumption below requirements and below production capacity was the inadequate income of farmers. While valuable, government measures were nevertheless too limited to bridge this serious gap.
4. The pre-war patterns of fertilizer distribution among crops, and especially among regions, were more indicative of the locus and intensity of competitive struggles to overcome the natural advantages of other areas and producers than of the locus and extent of the nation's potentialities for maximizing wartime agricultural production.

## 2. THE WARTIME SUPPLY OF FERTILIZERS

In mobilizing fertilizer resources, the fundamental objective had to be to maximize the contribution of fertilizers to raising the volume and efficiency of needed agricultural production without unduly burdening the rest of the war economy through excessive withdrawals of scarce materials, productive facilities or transportation means. Specifically, therefore, it was necessary to overcome supply disruptions introduced by the war,

<sup>24</sup> Estimates of nitrogen used on corn in each state supplied by Fertilizer Division, Bureau of Plant Industry, August 3, 1943.

to effect the largest increase in total fertilizer consumption possible within the limitations cited above, to so alter the distribution of available supplies as to accord with both the relative essentiality of crops and the relative productivity of fertilizer applications in alternative areas, and, of somewhat lesser significance, to decrease transport requirements by reducing the ratio of fillers in mixed fertilizers.

Most of the common wartime pressures of expanding needs and simultaneously shrinking supplies affected fertilizers only gradually and mildly. The curtailment of imports from abroad had real significance only for potash stocks; and in this case the lessening of foreign shipments had already been under way for three years prior to the war, thus allowing time for partial compensation through expanded domestic production.<sup>25</sup> Diversion of manufacturing facilities in response to military requirements was of major importance only in regard to nitrogen capacity, where the impact was eased by increasing the import of Chilean nitrates.<sup>26</sup> Of the two most influential factors tending to increase the demand for fertilizers, higher production goals and greater farm income, neither represented very sudden or very urgent pressure.

One result of the absence of such severe emergency hardships was that progress in fertilizer use continued for some time under the incentives common to the preceding years of peace and, hence, in the image of established patterns.

### *Production and Consumption in Wartime*

Total fertilizer consumption grew steadily after 1940, as shown in Table 30. The 1.7 million tons of plant food applied in that year constituted a new record for this country; but annual use continued to rise, reaching nearly 2.4 million tons in 1943 and expanding by almost 500,000 tons more during the succeeding two years. Because this rate of increase exceeded that at which additional lands were brought under cultivation, average consumption of plant foods per acre climbed steadily from 10.2 pounds in 1940 to no less than 16 pounds in the last year of hostilities, thereby marking impressive progress toward one of the primary objectives in mobilizing fertilizer resources.

<sup>25</sup> Potash imports declined by more than 70 percent between 1937 and 1940, from 787,000 tons to 219,000 tons, with the bulk of the reduction taking place in imports from Germany, the Netherlands, and Belgium. (*Agricultural Statistics—1942*, p. 684.)

<sup>26</sup> Except for a slight reduction between 1937 and 1938, imports of nitrate of soda from Chile increased steadily from 438,000 tons in 1935 to more than twice that in 1942. (*Agricultural Statistics—1942*, p. 684; *House Hearings on Agricultural Department Appropriation Bill, 1944*, p. 716.)

TABLE 30  
ANNUAL CONSUMPTION OF PLANT FOODS, 1940-45<sup>1</sup>  
Thousands of Tons

Year	Nitrogen	Phosphoric Acid	Potash	Total	Pounds of Plant Food per Acre <sup>2</sup>
1940 .....	419.1	912.3	435.0	1,766.4	10.2
1941 .....	458.1	993.6	466.7	1,918.4	11.1
1942 .....	398.6	1,130.6	547.0	2,076.2	11.8
1943 .....	505.6	1,243.3	643.2	2,392.1	13.3
1944 <sup>3</sup> ....	639.9	1,408.1	649.0	2,697.0	14.9
1945 <sup>3</sup> ....	679.0	1,438.0	746.0	2,863.0	16.0

<sup>1</sup> Including Hawaii, Puerto Rico, and government-distributed fertilizers.

<sup>2</sup> Based on acreages given in Table 7.

<sup>3</sup> Revised and additional data supplied by A. L. Mehring, August 7, 1947.

Source: A. L. Mehring, Hilda M. Wallace and Mildred Drain, "Nitrogen, Phosphoric Acid, and Potash Consumption in the U.S.", *op. cit.*, p. 597.

Sober appraisal compels recognition of the fact that even these very substantial gains fell short of exhausting practicable potentials. The most telling evidence in this connection relates to the further increases in crop yields which might have been effected through still heavier applications of fertilizer. For example, according to estimates made by the Conservation and the Production Programs Branches of the War Food Administration, increments in fertilizer consumption in excess of the quantities programmed for 1943-44 would have yielded from 5 to 15 pounds of extra food for every additional pound of nitrogen, phosphoric acid or potash applied to needed crops.<sup>27</sup> Nor were such unrealized potentials completely divorced from the realities of economic incentives; agronomists and agricultural economists have estimated that the 1943 level of fertilizer use approximated less than one-half of the levels which farmers would find profitable over a period of years under such general economic conditions as prevailed in 1943.<sup>28</sup>

Greater consumption of fertilizers would also have helped to narrow the enormous gap between annual losses of plant nutrients from the soil and replacements made. Thus, it has been estimated that the volume of fertilizers applied during 1943 replaced less than one-seventh of the nitrogen, less than one-fourth of the potash and less than one-half of the phosphates removed from the soil each year through crop production, leaching and erosion.<sup>29</sup> Serious as such losses have been for many years, it should

<sup>27</sup> From an unpublished table of such detailed estimates by these agencies dated August 14, 1943.

<sup>28</sup> U. S. Department of Agriculture, *A National Policy for Fertilizers and Liming Materials*, mimeographed, February 1945, pp. 2-4.

<sup>29</sup> Estimated by Dr. George D. Scarseth, Director of Research, American Farm Research Association, and submitted by Edward A. O'Neal, President of the American

be emphasized that within the short-term perspectives of mobilization urgencies, as differentiated from long-term national requirements, the paramount objective of wartime agricultural policy could not be to maximize conservation advances, as was advocated by some soil specialists; it had to be, rather, to use soil and fertilizer resources so as to yield the largest possible immediate output of needed farm products, even if such a program had entailed the risk of "consuming" some of the notable soil conservation gains which had been achieved prior to the outbreak of hostilities.

In considering the effectiveness of mobilization efforts, as distinguished from results traceable to other factors, it is necessary to assess the extent to which available resources were utilized and the extent to which limiting obstacles were overcome. Prior to the war, as has been noted, farm income had been the controlling limitation on fertilizer consumption, but during the war gross farm income increased more rapidly than such consumption, thereby attenuating the close relationship which had prevailed prior to 1940.<sup>30</sup> Whether supply factors had become the preventive of still more rapid advances in fertilizer consumption will be determined by examining the situation in respect to each of the major plant nutrients, for reference has already been made to the dissimilarity of the problems which affected them.

### Nitrogen

Three successive wartime developments contributed to reducing the supply of nitrogen-bearing fertilizer materials. First, the armed forces requisitioned much of the chemical nitrogen capacity in order to speed the production of explosives. Then, the shortage of shipping necessitated some interruption of imports. Later on, the urgency of food requirements forced a heavy diversion of oilseed meals, hitherto used to add organic nitrogen

Farm Bureau Federation, to Senate Committee on Appropriations, *Hearings on Agriculture Department Appropriation Bill, 1946*, U. S. Government Printing Office, 1945, p. 486.

<sup>30</sup> The relative changes in gross farm income and total plant food consumption during 1930-45 were as follows:

	Gross Farm Income	Plant Food Consumption
	%	%
1930-32 .....	- 44	- 46
1932-37 .....	+ 76	+ 85
1937-38 .....	- 10	- 8
1938-40 .....	+ 9	+ 11
1940-45 .....	+ 124	+ 62

(*Agricultural Statistics—1946*, p. 563; Tables 27 and 30.)

to the soil, in order to supply needed livestock feeds.<sup>31</sup> The results might have been catastrophic, but such was the timing of these blows and so limited their impact that, even in the calendar year 1942, which covered the greatest combined weight of these factors, fertilizer consumption was reduced less than 15 percent from the all-time high in 1941.

Thus, short supplies necessitated a decrease in consumption of nitrogen fertilizers in 1942 and limited the rate of increase in their use for some time thereafter. Nitrate of soda was brought under control by the government immediately after Pearl Harbor, to be joined in a few months by all types of chemical nitrogen.<sup>32</sup> By the fall of 1942, restrictions had been placed on the use of nitrogen fertilizers for lawns and parks, for small grains (principally winter wheat), and for melon crops and cucumbers.<sup>33</sup> During the following January, the Department of Agriculture established three groups of crops, giving Group A first priority on fertilizer supplies, allotting whatever supplies remained to Group B, and prohibiting the use of fertilizers for crops relegated to Group C.<sup>34</sup>

The nitrogen shortage began to ease toward the latter part of the spring of 1943. Heavy shipments of nitrates had been arriving from Chile. The completion of additional ordnance plants had provided the Army with more explosives capacity than its schedules required and hence permitted some diversion of production to agriculture. Also, imports were becoming available from Canada in increasing quantities.

31 On June 17, 1942, the Critical Materials Committee of the Department of Agriculture recommended: "That, whereas, the most efficient utilization of oilseed meal is by livestock and since the prospective supplies for 1942-43 will be less than the quantity needed to properly balance rations, the oilseed meals of edible quality should be used for livestock feed and only the normal amounts and any inedible quantities should be used for fertilizer until it is definitely determined that the supply will not be consumed by livestock." (Office for Agricultural War Relations, *1942-43 Fertilizer Program*, undated but probably mid-year 1942, mimeographed, p. 7.)

32 War Production Board General Preference Order M-62, issued January 15, 1942, placed sodium nitrate under allocation. Orders M-163, M-164, and M-165, effective June 1, 1942, placed by-product sulphate of ammonia and sulphate of ammonia, synthetic ammonia, and cyanamide, respectively, under general allocation.

33 WPB Chemical Fertilizer Conservation Order No. M-231, effective September 12, 1942, placed all chemical fertilizers under certain restrictions with respect to grade, manufacture and use.

34 Food Production Order No. 5 was issued by the Department of Agriculture on January 18, 1943 to supersede War Production Board Fertilizer Order M-231. Its crop designations were as follows:

Group A: peanuts, soybeans, hemp, flax, guayule, cotton (1-1/8" and over) and others.

Group C: small grains, melons, cucumbers (except for processing) and such non-crop uses as lawns, parks, golf courses, etc.

Group B: so defined as to include all crops not included in the other two groups.



When the proposed nitrogen fertilizer program for 1943-44 was finally drawn up, it provided for a 35 percent increase in supply over the preceding fiscal year. In recognition of the changed situation, a revision of Food Production Order No. 5 was announced on July 3, 1943 easing the restrictions on Group B crops and permitting farmers to increase fertilizer applications on both Group A and Group B crops up to "the rate of application per acre recommended by the State Agricultural Experiment Station for such crop in such area."<sup>35</sup>

In short, the consumption of nitrogen fertilizers had thus far increased as rapidly as supply factors had permitted. Looking ahead in 1943, it was earnestly to be hoped that this upward trend would be maintained and that the limited horizons born of pre-war standards of fertilizer requirements would no longer be permitted to dull our appreciation of what might be accomplished by still heavier applications both during the war to increase food production and afterward to rebuild some of the past despoliation of our soil resources. And yet, although the particular instances might have been justified in some measure by war considerations of a non-agricultural nature, two developments in 1943 foreshadowed the possibility that efforts to continue raising fertilizer consumption levels had not yet gained unanimous support. First, a proposal that the increased supplies of nitrogen expected from domestic ordnance plants and from Canada be utilized as a substitute for, instead of as a supplement to, imports from Chile won sufficient adherents to be included in an early official summary of the proposed fertilizer program for 1943-44.<sup>36</sup> This ready acceptance of artificial restrictions on supply, even though reversed later, cannot be viewed as without significance for future fertilizer policy; for the total nitrogen supply was admittedly short of effective demand at the time when the proposal was made, and especially since it had been found possible to spare the necessary shipping even at the very height of the submarine menace, when the supply of merchant shipping had reached truly desperate levels, despite the fact that much of the resultant imports had been used in the production of inessential crops. The second development was that work on two nitrogen plants with a planned annual capac-

<sup>35</sup> War Food Administration, *Food Production Order No. 5*, Part 1206, Revised, July 3, 1943, U. S. Government Printing Office, 1943, p. 2.

<sup>36</sup> Letter to Senator Harley M. Kilgore from Dr. D. A. FitzGerald, Deputy Director of the Food Production Administration, dated May 3, 1943. The proposed elimination of imports from Chile was based on the expectation that an additional 50,000 tons of nitrogen would be obtained from domestic ordnance plants and an additional 100,000 tons from Canada, thus equalling the 150,000 tons nitrogen content of approximately 900,000 tons of Chilean nitrate of soda which had been procured.

ity of 150,000 tons of nitrogen, which were under construction for the Army, was stopped on the ground that military requirements were already fully provided for.<sup>37</sup> From the standpoint of food production, however, potentials of a practicable nature were still unapprehended whose substantial proportions were apparent from the estimate by War Food Administration experts that an additional 150,000 tons of nitrogen beyond the volume originally allocated could have been expected to expand agricultural output during the fiscal year 1943-44 by 2.6 million tons of forage, 31 million bushels of feed, 12.5 million bushels of potatoes, 3 million bushels of wheat and some 250,000 tons of vegetables.<sup>38</sup> The consumption of nitrogen in agricultural production rose sharply during 1944, approximating 640,000 tons. But by the end of that year, mounting shortages of nitrogen for military and industrial uses forced the consideration of belated measures to offset the consequences of prematurely curtailing the facilities construction program by further expanding the productive capacity of existing plants.<sup>39</sup>

### Potash

Through a most creditable expansion of production, the domestic potash industry provided a continuous increase in the supply of potash available to farmers during 1940-43 despite the virtual cessation of imports of potash-bearing materials, which had reached the substantial total of 787,500 tons as recently as 1937.<sup>40</sup> Annual consumption rose by almost one-half between 1940 and 1943. Nevertheless, the War Food Administration anticipated that total demand would still fall nearly 5 percent short of full capacity production of potash during the fiscal year 1942-43.<sup>41</sup>

Even the record levels of potassic fertilizer consumption reached during the war were insufficient to maximize their potential contribution to agricultural production. For example, it was estimated that the application of 100,000 tons of potash in addition to planned allocations during the fiscal year 1943-44 could have yielded an additional 36 million bushels of potatoes and sweet potatoes, 18 million bushels of corn, 3½ million

37 C. Kenneth Horner, *Industry Report—Fertilizers*, U. S. Department of Commerce, mimeographed, January 1945, p. 6.

38 From unpublished War Food Administration estimates of August 14, 1943, cited previously.

39 C. Kenneth Horner, *op. cit.*, p. 6.

40 *Agricultural Statistics—1942*, p. 684.

41 War Food Administration, Office of Agricultural War Relations, *1942-43 Fertilizer Program*, mimeographed, October 1, 1942, pp. 13, 16.

bushels of wheat, 567,000 tons of vegetables, one million bushels of dry beans and peas, and large quantities of extra soybeans and peanuts.<sup>42</sup>

In view of the increased pressure for food production, it was evident that domestic agricultural requirements for potash would continue to rise sharply for the duration of the war, and even beyond that until the food output of the United Nations once more equalled essential requirements. As an index of the scale of the problem which lay ahead, P. H. Groggins, Chief of the Chemicals and Fertilizers Branch of the War Food Administration, estimated in August 1943 that American farmers would require 70 percent more potash in 1944 than they had used during 1942.<sup>43</sup>

Three alternatives were considered in seeking means of bringing the supply of potash into adjustment with the demand: first, to initiate imports from Chile, where 100,000 tons of low potash-content nitrates could be obtained;<sup>44</sup> second, to expand the productive capacity of our domestic industry; third, to restrict domestic consumption below estimated essential requirements. The last of these was obviously inadvisable as a basic policy in the face of expanding and increasingly urgent needs, except as necessitated by residual shortages after all practicable means of increasing total supplies had been exhausted. The first offered an assured supply, but one quite small in the perspective of mounting needs. Thus, the expansion of domestic production was necessary to keep pace with requirements.

It was estimated that at least 50,000 additional tons of potash could be obtained annually through the expansion of plants already in operation.<sup>45</sup> Inasmuch as the known resources of water-soluble potash in this country approximate 90 million tons,<sup>46</sup> it was also apparent that huge additional quantities of potash could be made available through the construction of new processing facilities. Some expansion of domestic capacity seemed inevitable. But evidence also accumulated, as will be noted in detail in the following section on phosphorus, that important groups were prepared to resist any very sizable expansion most vigorously. In part, these objections sprang from a legitimate desire not to withdraw construction materials and machinery from other high priority undertakings. But such hostility was also traceable in no small degree to the familiar industry concern lest excessive productive capacity after the war result in

42 From the unpublished estimates of August 14, 1943 by the War Food Administration, cited previously.

43 Letter from Mr. Groggins to Dr. D. P. Morgan, Director, Chemicals Division, War Production Board, August 28, 1943.

44 *Ibid.*

45 *Ibid.*

46 *A National Policy for Fertilizers and Liming Materials*, p. 5.

a disadvantageous reduction in potash prices. At any rate, despite the foregoing evidences of need and of available resources, the consumption of potash failed to expand significantly during 1944, as may be seen in Table 30.

### *Phosphorus*

Having noted earlier that low crop production is more often associated with the lack of phosphorus than with any other plant food deficiency, it is particularly important to examine the adequacy of consumption increases in this category during the war, and to determine what factors hindered still more rapid improvement.

The consumption of phosphatic fertilizers increased by about 36 percent between 1940 and 1943. This outdistanced the 21 percent gain made by nitrates and was not far behind the 47 percent increase achieved by potash. Yet this performance was in several respects by far the least satisfactory of the three; for the consumption of phosphatic fertilizers not only continued to fall far short of needs, but even hundreds of thousands of tons short annually of absorbing available productive capacity.

In an address in the spring of 1943 based on comprehensive technical materials, Senator Lister Hill of Alabama called the attention of his colleagues to the extent and seriousness of phosphorus shortages in our soils.<sup>47</sup> Four of the most provocative facts revealed by him were:

1. "Every pound of  $P_2O_5$  [phosphoric acid] properly applied to the soil and combined with the planting of legumes would capture 3 pounds of nitrogen from the air and reduce by that amount the burden on our [inadequate] commercial nitrogen production facilities."<sup>48</sup>
2. Experiments conducted by the Tennessee Valley Authority show that on 42,000 farms in 29 states an average application of 17 pounds of  $P_2O_5$  "on every acre devoted to crop and meadow and pasture... increased production by an average of a little over 30 percent [with] the same land, the same men [and] the same equipment.... On the most successful farms in that demonstration program, production of the foods we need today soared more than 60 percent over the previous maximum, likewise without more machinery or manpower. On those farms as much as 30 pounds of [ $P_2O_5$ ] were applied to every cleared acre." Yet, as a result of "conventional and obsolete fertilizing practices... the average use of  $P_2O_5$  in the country as a whole is only 2 pounds per acre of crop and meadow and pasture land."<sup>49</sup>

47 *Congressional Record*, April 29, 1943, pp. 3839-3856.

48 *Ibid.*, p. 3844.

49 *Ibid.*, p. 3840.

3. According to our standards, enormous quantities of  $P_2O_5$  were being applied in foreign countries prior to the war. "As long ago as 1928 records show that Holland was using an average of 40 pounds per acre, Denmark 20 pounds per acre. . . . In New Zealand farmers specializing in the production of butter treated their land with an average of 65 pounds of  $P_2O_5$  per acre. . . . Germany and Japan recognized that phosphorus was a war material . . . taking 26 and 20 percent, respectively, of our total exports [of phosphate rock and superphosphate] in the years 1935-39."<sup>50</sup>
4. "One shipload of phosphate is as good as seven shiploads of food. Every shipload of phosphate we send to Great Britain will save us later from sending seven shiploads of food. . . . We ought to have surplus stockpiles of  $P_2O_5$  to send to recaptured countries where we know its use would rebuild fertility . . . [for] the land, as well as the men and women of conquered nations, is being starved to death."<sup>51</sup>

These were graphic indices of how great was our need for more phosphates, and of how much they might magnify the achievements of our food mobilization efforts. Indeed, prospective gains from this quarter would have been of compelling proportions even if the above estimates had had to be reduced somewhat in appraising probable returns under wartime conditions.

The inadequacy of our utilization of available phosphate capacity was well illustrated by the balance sheet for 1942-43. Consumption was estimated to have reached a record of approximately one-million tons; yet productive capacity exceeded that amount by more than two-thirds, even without including seven Southern plants that were inactive at the close of 1941 but which could have been placed in operation without extensive repairs or additions to their equipment.<sup>52</sup> This carry-over of unutilized capacity continued to be of huge proportions in 1943-44, for production was expected to aggregate about 1.3 million tons.<sup>53</sup> Consumption of

<sup>50</sup> *Ibid.*, p. 3849.

<sup>51</sup> *Ibid.*, p. 3850.

<sup>52</sup> 1942-43 *Fertilizer Program*, pp. 8-9.

<sup>53</sup> Letter to Senator Harley M. Kilgore from Dr. D. A. FitzGerald, May 3, 1943. Also see the mimeographed report by the Chemicals and Fertilizers Branch of the War Food Administration, *The Fertilizer Outlook—1943-44*, October 1, 1943, p. 5. For a time it appeared that productive capacity might be reduced by a shortage of the sulphuric acid needed to reduce phosphate rocks but this threatened bottleneck was eliminated by the Army's allocation of excess capacity at ordnance plants to meet agricultural requirements. (See letter to Mr. M. Lee Marshall, Deputy Administrator of the War Food Administration, from Col. Marion Rushton, Administrative Officer, Office of the Under-Secretary of War, dated August 26, 1943.)

phosphoric acid rose by 13 percent between 1943 and 1944 and by an additional 2 percent during the succeeding year. Such advances are overshadowed, however, by the fact that the production of ordinary superphosphate in 1944 came to only "59 percent of the capacity of all plants, including those under construction." Plants producing still more concentrated phosphates were fully utilized, but such plants accounted for only 12 percent of the total superphosphate capacity on a tonnage basis.<sup>54</sup>

In strong contrast with the foregoing evidence of failure to absorb even the available capacity, TVA scientists were reported by Senator Hill to have estimated that annual production would have to be raised to 3.4 million tons in order to provide 17 pounds per acre for those selected areas, approximating 50 percent of the country, where conclusive tests have shown that gains might be achieved similar to those obtained on demonstration farms—gains of 30 percent over previous production.<sup>55</sup> The magnitude of these potential rewards is evident from the fact that years of supposed mobilizing of all factors entering into crop production had increased national output in 1944 by only 14 percent over the 1940 level. Our phosphate deposits, the largest in the world,<sup>56</sup> were fully capable of sustaining such expanded production. The enormous military and political value of such additional food supplies would certainly seem to have warranted the small investment of critical materials necessary for the construction of additional processing facilities.

The prospects for supplying such extraordinary requirements gave every promise of remaining dim, however, so long as the opponents of expansion continued strong enough even to prevent the full utilization of already available productive capacity. It has been noted that more than 600,000 tons of phosphoric acid were not brought into being in the fiscal year 1942-43 despite the readiness of facilities to produce them. If only one-fifth that quantity, merely 122,000 tons could have been applied during the fiscal year 1943-44, in addition to the amount actually provided, the extra yield could have equalled more than twelve pounds of urgently needed war crops for every pound of this supplemental fertilizer. At the year's end, there could have been a dividend above expected returns of

<sup>54</sup> *Fertilizers and Lime in the U. S.*, p. 60.

<sup>55</sup> *Congressional Record*, April 29, 1943, p. 3846. By way of comparison it should be noted that the Committee on National Fertilizers and Lime Policy estimated that farmers would find it profitable during the period after the war to increase the annual consumption of phosphoric acid to 2.7 million tons if national income levels should approximate those of 1943. (*A National Policy for Fertilizers and Liming Materials*, p. 4.)

<sup>56</sup> *1942-43 Fertilizer Program*, p. 9.

18 million bushels of potatoes and sweet potatoes, 14 million bushels of corn, barley and oats, 7½ million bushels of wheat, 324,000 tons of vegetables and 54,000 tons of peanuts;<sup>57</sup> and, as has been noted, unutilized capacity was even greater in succeeding years.

Viewed in the framework of its peacetime functions, the government's program of granting conservation materials in lieu of payments continued to expand helpfully, distributing almost 175,000 tons of  $P_2O_5$  in 1943 compared with 117,000 tons in 1940.<sup>58</sup> But war urgencies were engulfing this conception of the government's role as patient educator and distribution broker. Enormous production potentials were being neglected. Private industry had built up capacity and was increasing consumption slowly but was apparently incapable of racing it ahead at the pace demanded by developing war emergencies. The task was essentially a task of war mobilization. It should have been recognized as such by the Federal Government and a program of wartime aids to producers and farmers might well have been initiated to ensure the distribution of all of the phosphates and other fertilizers that could be produced, and then to expand both productive capacity and consumption until war needs were fully met. Instead of finally initiating the long-delayed rapid expansion of such aid, however, 1944 found the Agricultural Adjustment Agency distributing less than 7 percent more phosphates than in 1943.<sup>59</sup>

In summarizing the foregoing discussion, it may be noted that important gains were made in expanding the consumption of plant foods on farms, but that these gains still fell materially short of the levels which would have been optimal in terms of maximizing either the physical yields of needed agricultural products or even the net financial returns secured by farmers. Further increases could have been achieved through the construction of additional productive capacity. As a matter of fact, however, domestic plant food consumption failed to increase at a substantially greater rate during 1943-45 than had been the case between 1940 and 1943, when the obstacles to such expansion assumed graver proportions.<sup>60</sup> The most common explanation given for the absence of a more vigorous facilities expansion program was that additional construction would have

57 From unpublished estimates of August 14, 1943 by the War Food Administration, cited previously.

58 For annual distribution during 1940-42, see *House Hearings on Agriculture Department Appropriation Bill, 1944*, pp. 1605-6. For 1943 data, see *House Hearings on Agriculture Department Appropriation Bill, 1945*, pp. 955-6.

59 *House Hearings on Agriculture Department Appropriation Bill, 1946*, Part 2, p. 315.

60 Total domestic plant food consumption increased by 35 percent between 1940 and 1943 and by 20 percent between 1943 and 1945. See Table 30 for actual data.

absorbed resources more urgently required by non-agricultural sectors of the war program. This may well have been the case, although the wartime facilities construction program had already passed its peak by the early part of 1943. The question still remains, however, whether within the framework of agricultural mobilization, the heavy allocations of materials, manpower and equipment for the rapidly expanding farm machinery program might not have yielded greater returns in the form of needed farm products if a more generous share of equivalent resources had been made available for the expansion of fertilizer-producing capacity.

### 3. REDISTRIBUTION OF FERTILIZER SUPPLIES AMONG CROPS

The second basic objective in mobilizing fertilizer resources was to so redistribute whatever supplies were available as to maximize the yield of needed crops. To achieve these ends, it would have been necessary to reduce the proportion of fertilizer being used on inessential crops and on infertile soils in order that larger quantities might be used on war crops and especially on those fields which yield the greatest returns per pound of fertilizer applied. Inasmuch as the necessity for such redistribution grows in proportion to the inadequacy of fertilizer supplies relative to total requirements, the foregoing review of such inadequacies accentuates the importance of this measure of mobilization progress.

The pattern of fertilizer distribution among crops during 1940-43 had two highly significant characteristics. It reflected some conversion from the peacetime pattern in that peanuts and soybeans, two of our most important war crops, were being provided with very substantially increased supplies. On the other hand, it resembled the peacetime pattern in the continued heavy consumption by tobacco and cotton. As shown in Table 31, estimates of the fertilizer requirements of major crops in the

TABLE 31

ESTIMATED FERTILIZER REQUIREMENTS FOR MAJOR CROPS, FISCAL YEAR 1943-44

Tons

Crop	Nitrogen	Phosphoric Acid	Potash
Cotton .....	94,740	95,144	60,535
Corn .....	83,547	102,520	51,103
Potatoes .....	39,837	66,346	50,495
Tobacco .....	21,913	40,528	29,828
Wheat .....	17,076	60,693	33,890
Peanuts .....	13,487	76,050	40,748
Soybeans .....	3,460	43,558	31,752

Source: Unpublished estimates supplied by Food Production Administration, May 3, 1943.



fiscal year 1943-44, prepared by the War Food Administration as a basis for planning distribution, indicated that as between these opposing trends, the inertia of past customs still exerted the greater influence.<sup>61</sup>

So long as fertilizer supplies were far in excess of consumption, there was little justification for criticizing the huge demands made on them by cotton and tobacco; not so, however, the continued avoidance of adjustments from peacetime consumption levels despite the straitening of supplies and despite increases in the requirements of more urgently needed war crops. In 1943-44, cotton was expected to lead all the other crops in the consumption of nitrogen and potash, the plant foods in least ample supply, and to rank second to corn in the consumption of phosphates. Together with tobacco, cotton was expected to consume approximately one-fifth of the record volume of fertilizers to be used during that fiscal year—a fact loudspoken in its revelation of unrelenting resistance to conversion.

This monopolizing concern with local interests was illustrated by the 3 percent increase in the volume of commercial fertilizer used in producing cotton in 1943 as compared with 1941.<sup>62</sup> During the first two years of war, distant military and naval bases had to be constructed and garrisoned. War equipment had to be moved up to the fighting fronts. A tremendous flood of military demands far surpassed available shipping facilities, necessitating the most rigorous elimination of waste and of non-essential services. Nonetheless, shipping officials were constrained to divert ships from military runs to Australia and to South Pacific bases in order to pick up nitrates from Chile. Time was wasted; military shipments were delayed; but the nitrates kept coming in—much of it destined for cotton and tobacco fields, lest their production be forcibly reduced by the diversion of domestic nitrate plants to army needs.<sup>63</sup>

As an indication of the cost of such expediency, it should be noted that every pound of nitrates, phosphates and potash used during 1943-44 to grow cotton and tobacco would have yielded 15 pounds of actually digestible nutrients if it had been applied to the production of forage for livestock. Used on other crops, half the fertilizer consumed by cotton and tobacco would have made possible an increase in 1943-44 food production

61 That there was cause for serious concern with this problem was apparent from the finding of Secretary of Agriculture Claude R. Wickard that although fertilizer supplies during 1942 exceeded estimated minimum requirements, some of the vital war crops did not get enough. (*Report of the Secretary of Agriculture, 1942*, p. 50.)

62 *The Cotton Situation*, May 1945, p. 13.

63 *House Hearings on Agriculture Department Appropriation Bill, 1944*, pp. 202-3.

of 70 million bushels of potatoes and sweet potatoes, 1.2 million tons of vegetables, 35 million bushels of corn, barley and oats, and 15 million bushels of wheat.<sup>64</sup>

The tool whereby redistribution of fertilizers among crops might have been effected was the War Food Administration's Food Production Order 5. In addition to prescribing the grades and mixtures which could be sold during the war, this regulation also established the relative priority of crops in the allocation of fertilizers as well as controls over the rates at which fertilizers might be applied to various crops. In view of the broad scope of this order, of its status as a direct expression of national policy, and of the unquestioned authority which lay behind it, the inadequacies of redistribution must be traced either directly to this document or to shortcomings in its administration.

The establishment of priorities among crops in accordance with their relative essentiality to the war effort was as necessary to guide the redistribution of fertilizers as it would have been to the re-allocation of agricultural manpower and machinery or to the restructuring of farm product prices. Ideally, one master set of crop priorities should have served as the basis for specific priorities with respect to each factor of production. Such a basic priorities schedule would have served as the compass by which each of the resource mobilization programs might have been steered to ensure that its contributions would be maximized. In the absence of such centralized guidance, each program was confronted by this same problem of measuring competing claims, and the directors of each were free to adopt whatever devices they might choose either to resolve the difficulty or evade it.

Crop priorities were formulated by the Selective Service System to rationalize its demands on agricultural manpower but, as has been noted, the value of the ratings was quickly undermined by the expansion of the "essential" list to include virtually all crops which were major claimants for acreage and farm labor. On the other hand, no attempt was made to gear farm machinery allocations to an authoritative definition of the relative essentiality of crops. In the case of fertilizers, Food Production Order 5 adopted the nominal form of distinguishing between more essential and less essential crops. Unfortunately, the "Group A" category was limited to peanuts, sugar beets for the production of seed, hemp, potatoes, beans, peas and a few other vegetables, leaving almost all of the major competitors for fertilizer within an undifferentiated "Group B."<sup>65</sup>

<sup>64</sup> Unpublished War Food Administration estimates of August 14, 1943, cited previously.

<sup>65</sup> *Food Production Order 5*, Revised, July 3, 1943.

The inadequacy of this gross definition of relative essentiality might have been partially overcome through effective use of the power to limit the fertilizer consumption per acre of less essential crops. Yet, this opportunity, also, was dissipated. Authority for the establishment of maximum rates of fertilizer application was delegated to the State Agricultural Experiment Stations. In view of the fact that most fertilizer consumption is materially below the scientifically justifiable maximum, such determinations could not be of much effect in allocating an inadequate total supply among competing crops. Nor were the Stations authorized to consider such factors as relative essentiality to the war effort in making their recommendations. Nevertheless, even these extremely modest restraints were soon to be vitiated,<sup>66</sup> thus abandoning any pretense in the wartime fertilizer program to promoting the redistribution of available supplies in accordance with mobilization urgencies.

#### 4. WARTIME ADJUSTMENTS IN REGIONAL DISTRIBUTION

Having failed to maximize the volume of fertilizers made available for the farm products needed most, it might still have been possible to achieve notable advances in the mobilization of fertilizer resources by so redistributing supplies regionally as to heighten average crop yields per acre as far as possible. The earlier review of the fertilizer situation prior to the war emphasized the extreme geographical concentration of fertilizer consumption and its wide divergence from the patterns of use which would ensure optimum yields. It could not but be a matter of further production loss, therefore, that distribution during wartime was almost an exact replica of that which prevailed when fertilizer supplies were unlimited and when the focus of agricultural policies was restriction rather than expansion.

TABLE 32  
RELATIVE PLANT FOOD CONSUMPTION BY REGIONS, 1940-43

Region	1940	1941	1942	1943
	%	%	%	%
North Atlantic .....	17.1	18.3	17.2	16.0
North Central .....	15.0	15.7	19.2	17.6
South Atlantic .....	41.0	39.5	38.6	40.1
South Central .....	21.8	21.0	20.3	21.1
Western and Pacific .....	5.1	5.5	4.7	5.2
Continental U.S. ....	100.0	100.0	100.0	100.0

Source: A. L. Mehring, Hilda M. Wallace, and Mildred Drain, *op. cit.*, pp. 600-605.

<sup>66</sup> As revised effective July 1, 1944, Food Production Order 5 limited "the maximum rate of application per acre for use on any crop...to (1) the rate recommended by the State Agricultural Experiment Station or (2) the rate customarily used in the area in which the crop is to be grown, whichever is greater."

The South Atlantic States continued to absorb two-fifths of the nation's plant food supply despite their relatively low yields per acre compared to other producing areas.<sup>67</sup> North Carolina, South Carolina and Georgia still consumed one-sixth more plant food annually than all of the 23 states comprising the North Central, Western and Pacific Coast regions combined.<sup>68</sup> In 1943, South Carolina was estimated to have applied one pound of nitrogen to its corn acreage for every bushel to be harvested, while the national average was expected to be approximately 15.5 bushels per pound, and while Illinois, Iowa and Minnesota were expected to garner more than 900 bushels for each pound used.<sup>69</sup>

The very fact that fertilizer supplies were restricted should have stimulated their reallocation to those areas where their use would have yielded the heaviest returns in the form of essential crops. Establishment of government controls over distribution provided a positive means for carrying out such aims. Appropriate intentions were publicized repeatedly.<sup>70</sup> War urgencies provided the most unassailable of justifications. Yet, the net changes through 1943 hardly equalled those which might have resulted from the impact on farmers' incomes of a short period of unfavorable weather at about harvest time.

One of the outstanding reasons for these wartime shortcomings was a historically conditioned under-estimation of the importance of fertilizers in this country, rooted originally in the comparative youth of most of our agricultural lands, and nurtured during the two decades preceding the war by the constant struggle to ward off production surpluses. Closely

<sup>67</sup> North Carolina, South Carolina and Georgia are the three heaviest consumers of fertilizer in the region. Their standing relative to the other states in per acre yields of corn, wheat, oats, potatoes and sweet potatoes is indicated by the following data for 1940: of 48 states producing corn, these three ranked 34th, 43rd, and 46th, respectively; of 48 states producing oats, they ranked 36th, 41st, and 45th, respectively; of 48 states producing potatoes, they ranked 27th, 24th, and 41st, respectively; of 40 states producing wheat, they ranked 28th, 31st, and 36th, respectively; of 22 states producing sweet potatoes, they ranked 8th, 16th, and 18th, respectively. (Testimony of Col. Lewis Sanders, Selective Service System, *Senate Investigation of Manpower Hearings*, Part 2, pp. 348-9.)

<sup>68</sup> In 1943, these three Southeastern states consumed about 623,000 tons of plant food as compared with a total of only 532,000 tons for the other 23 states. (A. L. Mehring, et al., *op. cit.*, pp. 602-3, 605.)

<sup>69</sup> For nitrogen requirements, see *1942-43 Fertilizer Program*, p. 5; for data on corn yields, see *Crop Production—1943 Annual Summary*, December 1943, p. 28.

<sup>70</sup> For example, a release by the Office of War Information, dated July 6, 1943, announced that, "A chemical fertilizer distribution program designed to make this important farm production supply item available to farmers in such a way as to give maximum assistance in the production of needed food and feed crops is provided in revised Food Production Order No. 5, issued today by the War Food Administration."

related was the habit of using fertilizers in a traditional ratio to acreage and other production factors, instead of intensifying its application so as to reduce land, labor and machinery requirements per bushel of corn or per ton of peanuts. The carry-over of these attitudes into the planning of war food production was well illustrated by an official statement relating to the proposed food program for 1943 which blandly mentioned that, "Fertilizer requirements have been estimated on the basis of maintaining crop yields at past levels."<sup>71</sup>

In view of the foregoing findings, it seems apparent that the mobilization of fertilizer resources fell materially short of practicable wartime potentials and needs. Total consumption of plant foods increased very heavily—and with great benefit to agricultural production—but neither as much as would have been desirable from the standpoint of maximizing the output of needed crops, nor as much as would have been possible and justifiable through the expansion of productive capacity. That heavier consumption would also have served longer-term national interests is evident from the careful estimates made by a government-sponsored committee of agronomists, economists and other agricultural specialists that, at national income levels approximating those of 1943, the simultaneous consideration of maintaining and improving soil resources as well as of increasing the profitability of farm operations over a period of years would recommend the consumption in the United States of about twice as much nitrogen as during 1943-44, twice as much phosphoric acid, and three times as much potash and lime.<sup>72</sup>

Shortcomings in the mobilization of fertilizer resources were further accentuated by the inadequate progress achieved in reallocating available supplies in favor of the crops needed most and in favor of the regions whose claims were supported by the promise of heavier returns rather than by traditional consumption levels alone.

<sup>71</sup> U. S. Department of Agriculture news release, December 1, 1942, p. 11.

<sup>72</sup> *A National Policy for Fertilizers and Liming Materials*, p. 4.

## CHAPTER IX

### OTHER PRODUCTIVE RESOURCES

EFFECTIVE re-allocation of agricultural resources in accordance with war urgencies required that farmers be thoroughly informed of the changes deemed most essential, that the new objectives be made as attractive as possible so as to encourage a widespread and ungrudging will to co-operate, and that efforts to achieve proposed changes be facilitated at each exposed point. Responsibility for the informational task and for the organization of appropriately directed common local action rested primarily with the several field agencies of the War Food Administration and the Department of Agriculture. The creation of powerful incentives in support of official goals was largely a function of price policies.<sup>1</sup> In the provision of practical aid to expedite proposed shifts, heavy demands were made not only on labor, machinery and fertilizer policies but on agricultural credit policies as well.

#### I. AGRICULTURAL CREDIT

Although not a direct means of production, credit was nevertheless of great importance in agricultural mobilization. Properly adjusted to war-time tasks, credit offered a powerful means of reinforcing programs for the harnessing of hitherto idle resources and for the re-allocation of those already in use to still more essential employments. Lacking appropriate controls, credit adjustments were capable of seriously disrupting mobilization efforts. An insufficiency of credit would hinder the thawing-out of pre-war rigidities determining the level and composition of agricultural production. An excess would breed wasteful competition for limited resources. Maldistribution could breed both difficulties simultaneously.

Credit as an instrument of government policy serves a variety of purposes beyond those commonly associated with its use in business. In addition to the normal purposes of augmenting working capital and long-term investment funds, government credits are also used to reduce the risks of co-operation in government-sponsored undertakings, to provide low cost productive subsidies in place of high cost non-productive relief,<sup>2</sup> and to

<sup>1</sup> Price developments and policies are discussed in Chapter XIII.

<sup>2</sup> In testifying before the Senate Appropriations Committee on May 27, 1940, Secretary of Agriculture Wallace said: "It is, of course, far cheaper for the government to help these families get re-established in farming than it is to provide relief for them in the cities or on the highways. From a social standpoint there is no comparison between the two methods. Work relief in the cities costs about \$800 per family per year. Even rural work relief costs from \$350 per year upward. Rehabilitation—counting all losses

pioneer new forms of credit assistance involving risks so indeterminate that their exploration has been deemed inconsistent with proper banking caution.<sup>3</sup> Such specialized forms of credit are as peculiarly confined to government issue as are the responsibilities in whose fulfillment they are undertaken. Yet banking groups have frequently registered disapproval of government credits without carefully distinguishing between those categories which they are themselves unwilling or unable to provide and those which do fall within the capacities of private enterprise.

War made the functional boundary between government and private credit even more indistinct because of the uncertainty of its duration. Even the best of investments for war purposes would have been "endangered" by too rapid a victory; even the poorest of investments in submarginal operations would have been repaid if the war lasted long enough. Since the nation was committed to the most immediate victory possible, which in turn rested on an unhesitating mobilization of resources, neither the financial insecurities of the lender nor of the borrower could be permitted to hinder this effort or to unbalance it by promoting only its most obviously profitable elements. The credit proffered had thus to be guaranteed against the possibility of penalizing the patriotic. Consequently, whatever the source of the funds, the responsibility for effecting such safeguards belonged to the government.

#### *Wartime Adjustments in Agricultural Credit Outstanding*

The major outlines of wartime adjustments in the volume of agricultural credit outstanding at the end of each year are readily drawn. As

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on loans, the cost of supervision, and every other item of expense—costs only about \$72 a year per family. Relief leaves the families in the end no better able to support themselves than in the beginning. Under the rehabilitation program, most families are able to work themselves into a self-supporting status within a few years." (*Report of the Administrator of the Farm Security Administration, 1940*, U. S. Government Printing Office, 1940, p. 9.)

3 Illustrations abound in the field of agriculture. Long-term credits to finance the purchase of farm properties have long been available from the Federal Land Banks. One of the benefits granted to participants in the Agricultural Adjustment Administration's crop restriction programs was a minimum price guarantee provided through eligibility for the artificially high crop loans of the Commodity Credit Corporation. In an effort to reduce the enforced bankruptcy of farmers during the trough of the depression, the Regional Agricultural Credit Corporations provided credits to keep farmers in production even where such loans were not justified by current income prospects—incidentally, 96% of the funds so advanced had been repaid by the end of 1938. (U. S. Department of Agriculture, *Yearbook of Agriculture, 1940*, U. S. Government Printing Office, 1940, p. 745). Similarly favorable experiences with Production Credit Association loans and with rural rehabilitation loans have resulted in opening important new fields of business for private banks, especially those located in rural areas.

shown in Table 33, changes in the total volume of such credits were of comparatively modest proportions. Alterations in its internal composition, however, were more striking both in respect to the relative proportions accounted for by short-term credits utilized for current production operations, as compared with long-term mortgage credits, and in respect to the relative shares contributed by government agencies and by private sources.

Total agricultural credit outstanding increased by only 3 percent between the beginning of 1940 and the beginning of 1942 and declined slowly but steadily thereafter to reach a level at the beginning of the last year of hostilities only 8 percent below that which had prevailed 5 years earlier. In 1940, and again in 1941, increases in the outstanding volume of short-term credits to farmers more than offset small, progressive reductions in the total farm mortgage debt outstanding. Thereafter, the increasing rate at which the mortgage debts and delinquencies accumulated during the early 1930's were being liquidated<sup>4</sup> resulted in returning more funds to lending institutions each year than were absorbed by further gains in short-term credits outstanding. In consequence, the proportion of total agricultural credit outstanding accounted for by short-term loans rose from 23 percent at the beginning of 1940 to 33 percent at the beginning of 1945. It should also be noted that, while the total outstanding farm mortgage debt was decreasing during the five years beginning at the outset of 1940 by \$950 million, the total value of farm real estate was rising by \$11,950 million, thereby reducing the ratio of farm mortgage indebtedness from 19.6 percent to 12.4 percent, the lowest level in more than 25 years.<sup>5</sup>

Oft-repeated wartime claims that the multiplicity of Federal credit programs had seriously contracted lending opportunities for private institutions find little support in actual records. The share of the outstanding farm mortgage debt held by Federal agencies declined from 42 percent at the beginning of 1940 to 33 percent at the beginning of 1945. An even sharper reduction took place in the relative proportion held by Federal agencies of the non-real estate agricultural credit outstanding. During the period under review, the total volume of such credit outstanding derived from Federal agencies increased only during 1940, and even then at a

<sup>4</sup> Testimony of Dr. A. G. Black, Governor of the Farm Credit Administration, *House Hearings on the Agriculture Department Appropriation Bill, 1944*, p. 1284.

<sup>5</sup> Bureau of Agricultural Economics, *Impact of the War on the Financial Structure of Agriculture*, U. S. Department of Agriculture Miscellaneous Publication No. 567, U. S. Government Printing Office, 1945, p. 80.



lesser rate than the gain achieved by commercial banks. In succeeding years, the volume outstanding from Federal agencies diminished steadily, while the holdings of commercial banks rose in every year but one. Thus, the proportion of the non-real estate agricultural credit outstanding held by commercial banks rose from 57 percent at the beginning of 1940 to 68 percent at the beginning of 1945. Nevertheless, even these substantial gains were overshadowed for country bankers by the extraordinary rate at which their vaults were being flooded with incoming funds. In the 20 leading agricultural states, total bank deposits in localities with populations of less than 15,000 were more than 3 times as great in 1945 as in 1940.<sup>6</sup>

It may be observed in passing that much of the discussion of wartime farm credit developments has centered on the wholesome changes, from the standpoint of normal business criteria, which have taken place in the balance sheet of American agriculture. According to the most careful estimates yet available, total farm assets rose by 89 percent between the beginning of 1940 and the end of the last year of the war, while total mortgages and shorter-term debts declined by 17 percent.<sup>7</sup> Such adjustments are of great significance in a variety of respects, but it should be borne in mind that they have little bearing on determination of the effectiveness with which credit resources were employed in the interests of maximizing mobilization achievements.

### *Production Credit Needs and War Risks*

Viewed from the standpoint of the lending agencies, these data certainly seemed to bear out the emphatic contention of private bankers that agricultural mobilization was not hindered by any lack of credit.<sup>8</sup> And

<sup>6</sup> *Agricultural Finance Review*, Bureau of Agricultural Economics, November 1946, p. 116.

<sup>7</sup> Norman J. Wall, *The Balance Sheet of Agriculture*, Bureau of Agricultural Economics, mimeographed, October 8, 1946, p. 10.

<sup>8</sup> "At the present time, I feel that the problem of the farmer is that of having manpower and machinery with which to work, there is not any question of credit. There is a world of money in the country for him." C. W. Bailey, Banker, Clarksville, Tenn. "At no time did the Secretary of Agriculture or any other person from the Department of Agriculture indicate that credit was a bottleneck in obtaining those food goals." Statement by Harold Stonier, Executive Manager, American Bankers Association before Joint Congressional Committee on Reduction of Non-essential Federal Expenditures, *Hearings*, Part 6, U. S. Government Printing Office, 1943, pp. 2053, 2055.)

Upon completing its hearings on agricultural credit, this committee reported to Congress that, "After careful consideration of all the facts, the committee is forced to the inescapable conclusion that an increased production of food is not dependent upon new sources of credit. The farmer's vital need is manpower and machinery." (Joint Congressional Committee on Reduction of Non-essential Federal Expenditures, *Additional*

yet, prospective borrowers felt two distinct inadequacies in the available supply of credit. Important production potentials on small farms continued to go untapped because of a shortage of the distinctive kinds of credit which were best adapted to such needs. Moreover, borrowing was unduly inhibited, even among financially more secure groups, by fear that a sudden collapse in war demands would endanger both their wartime earnings and their pre-war assets.

For most farmers, the expansion of their total output and the conversion of their crops in accordance with war needs entailed increased outlays and also increased risks. Such adjustments meant that production costs would be higher and that additional investments might be necessary for livestock, tools and other farm equipment. Moreover, the lack of appropriate manual skills and "know-how" served to magnify further the already considerable uncertainties attendant upon growing new crops in new areas for markets of uncertain size and duration.

Some farmers could finance these changes out of accumulated earnings; other needed additional credit. But there were a great many who hesitated to expose themselves to the hazards of either course. As Dr. A. G. Black noted, "There are large numbers of farmers fully capable of expanding the usual production of vital war crops or of producing such crops instead of other safer but less needed crops who have made it perfectly plain that, although they were willing and eager to apply their land, equipment and labor to the extent necessary for such production, they were not able or were not willing to risk their personal credit standing or their estates by assuming full personal liability beyond that amount necessary to finance what would be their normal operations" . . .<sup>9</sup> "A good many farmers have worked for 12 or 15 years and they have got themselves in pretty good shape, working off the results of the last war, and they simply are not putting out their own money to go all out for production."<sup>10</sup> Nor did they regard credits which might similarly entangle their assets as very much more tempting.

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*Report*, Senate Document No. 20, 78th Congress, 1st Session, U. S. Government Printing Office, 1943, p. 3.)

It is interesting to note that some Washington officials of the Department of Agriculture were also of this view. For example, J. Joe Reed of the Agricultural Conservation and Adjustment Administration commented as follows in an article on "Techniques for Achieving Agricultural Goals for 1943," (*Journal of Farm Economics*, February 1943, p. 89), "Credit for agricultural production in 1943 will be a limiting factor only in a minor way."

<sup>9</sup> *Senate Hearings on Agricultural Appropriation Bill, 1944*, p. 367.

<sup>10</sup> *Ibid.*, p. 345.

TABLE 33  
AGRICULTURAL CREDIT OUTSTANDING AND MAJOR SOURCES, 1940-46<sup>1</sup>  
Millions of Dollars

Year	Farm Mortgage Debt			Non-Real Estate Loans to Farmers					Total
	Total	Federal Agencies <sup>2</sup>	Life Insurance Companies and Insured Commercial Banks	Total, Federal Agencies and Commercial Banks <sup>3,4</sup>	Federal Agencies and Affiliates	Commercial Banks <sup>4</sup>	(Amount)	(Index)	
(Jan. 1)	(Amount)	(Index)	(Amount)	(Amount)	(Amount)	(Amount)	(Amount)	(Index)	(Index)
1940	6,586	100	2,761	1,980	845	1,135	8,566	100	
1941	6,534	99	2,715	2,277	951	1,326	8,811	103	
1942	6,484	98	2,638	2,378	881	1,497	8,862	103	
1943	6,117	93	2,426	2,569	870	1,699	8,686	101	
1944	5,635	86	2,059	2,400	854	1,546	8,035	94	
1945	5,271	80	1,736	2,602	833	1,769	7,873	92	
1946	5,081	77	1,502	2,086	740	1,346	7,167	84	

<sup>1</sup> Continental U.S. only.

<sup>2</sup> Federal Land Banks, Land Bank Commissioners and Farm Security Administration.

<sup>3</sup> Production Credit Associations, Federal Intermediate Credit Banks, Regional Agricultural Credit Corporations, Emergency Crop and Feed Loan Office, Farm Security Administration (rural rehabilitation, water facility and project equipment loans), Commodity Credit Corporation (loans other than those described below—latter being credited to the direct financing agency, whether government or private).

<sup>4</sup> Including loans secured by agricultural commodities covered by purchase agreements of the Commodity Credit Corporation, also certificates of participation in cotton producers pool; after Jan. 1, 1943 also includes some loans to processors of and dealers in agricultural commodities.

Source: Bureau of Agricultural Economics, *Agricultural Finance Review*, November 1946, pp. 88, 98.

This problem extended to all classes of borrowers contemplating expenditures which might not be fully amortized within the immediate growing season. Its impact grew increasingly more serious as military advances simultaneously brought closer the financial risks of demobilization and also intensified our need for still greater production. Expansion and conversion could not but continue to be retarded, therefore, until production loans were made available which were provided with "safety catches" to prevent their explosion in the hands of farmers employing them as weapons in the service of the war effort.

The form of credit required to encourage farmers to maximize their production of war crops would have limited their liability for repayment to the proceeds of the resultant output. Since private banks could not agree to forego repayments, however worthy the borrower's investment, such risks could be underwritten only by the government itself. This category of need was recognized by the Reconstruction Finance Corporation in the spring of 1942 when it issued special non-recourse loans to miners to stimulate the production of essential minerals.<sup>11</sup>

Not until January 1943 were farmers offered similar aid. At that time, Secretary Wickard announced that the newly revitalized Regional Agricultural Credit Corporation would provide advances to finance the actual cash costs of production of specified war crops, including marketing or processing costs, whose repayment would be limited to the actual returns from the crop, provided that the local War Board certified that crops had been diligently cared for.<sup>12, 13</sup> Approximately 70,000 such advances, total-

11 "Reconstruction Finance Corporation makes two types of national defense mining loans, for the development and mining of strategic and critical minerals, where the Corporation does not require a general obligation of the borrower, but looks for repayment solely from proceeds of the project and a lien on equipment acquired with loan or operation funds." (*House Hearings on Agriculture Department Appropriation Bill, 1944*, p. 1319.)

12 *Agricultural Finance Review*, November 1943, p. 51.

13 Liabilities on such advances were limited to the proceeds of the crop provided that the U. S. Department of Agriculture War Board for that county certified that:

- "1. The makers have used the amount advanced for producing the crops for the production of which the advances were made;
2. The makers have provided for insurance on such crops to the extent and in the manner required by the Corporation to protect its interest in such crops;
3. The makers in good faith have diligently applied principles of good husbandry to the production of such crops;
4. The makers have applied to the repayment of the advances an amount equal to all proceeds of such crops, including the proceeds of any incentive or other similar payments made by the U. S. on such crops and the proceeds of any insurance on such crops; and
5. Such amount has been insufficient to repay the advances in full."

(*Promissory Note Evidencing Special War Crop Advance*, Form RACC - FP - 4.)

ling \$25 million, had been made to farmers by the middle of 1943,<sup>14</sup> leaving the Corporation still possessed of more than \$150 million in uncommitted funds.<sup>15</sup> But at that point, Congress responded to the contention of private bankers that such aids were unnecessary by ordering the Corporation to cease making any further special war crop advances on a non-recourse basis during the fiscal year 1943-44 and to initiate the liquidation of those which were still outstanding. Accordingly, RACC loans thereafter were all full-liability loans, limited to selected crops in certain areas designated by the Secretary of Agriculture, and involving an interest rate of  $5\frac{1}{2}$  percent plus a service charge of an additional one-half of one percent. Moreover, before such loans could be approved, it had to be certain that no loan was obtainable from other sources. As a result, both the number and the total amount of such loans dwindled sharply during the remaining years of the war.<sup>16</sup>

The short-lived expansion of the Regional Agricultural Credit Corporation confirmed the existence of still unfilled needs for agricultural credit. Since commercial banks undoubtedly had sufficient funds to meet these requirements, their opposition to the government's freeing additional credits for such use is understandable. On the other hand, it had also become clear that farmers would not absorb the optimum volume of credits needed for mobilization without the limitations on personal liability for repayment which could be provided only by the Federal government. So long as these two interests continued to be arrayed against each other, the result was to encourage the reinforcement of pre-war credit patterns and hence of pre-war production patterns. Yet, private and government resources could readily have been joined in support of one another and in support of mobilization objectives by establishing some form of government guarantees or reinsurance to make it feasible for private banks to use their ample funds in granting appropriate categories of loans in aid of war food objectives.

#### *War Production Credits for Small Farms*

A second respect in which full agricultural mobilization was hampered by credit inadequacies related to the continued under-utilization of small farm resources. The chairman of the Food-for-Freedom Committee of the American Bankers Association asserted before a Congressional Committee in February 1943 that, "... The country banks are perfectly willing

14 *Agricultural Finance Review*, November 1943, p. 52.

15 *Ibid.*, p. 51.

16 See Table 35.

to lend to those who are deserving, and there are enough governmental agencies set up now through the Farm Security Agency and other governmental activities to make loans to the farmers for the production of all the foodstuffs that they can produce this year."<sup>17</sup> Yet, it would have been erroneous to believe, as this statement implied, that all credit needs were being met except those of the undeserving and of groups incapable of a significant contribution to our food requirements.

Reference has already been made in Chapter VI to an analysis of the extent to which the resources of various classes of farms might have been further mobilized for war production. Based on these results, the Bureau of Agricultural Economics and the Farm Security Administration estimated that approximately 2,940,000 of these farms could expand their farm output within one year's time—1,190,000 of them very substantially.<sup>18</sup> To a large degree, these latter involved,

those [farmers] who were unable to get back on their feet entirely during the period of rising prices and increasing prosperity in the late thirties. They were able to replace some of their depreciated and obsolete equipment and other resources, but they did not have sufficient time to do a complete job of it. . . . They have enough family labor . . . their farms are of sufficient size. . . . What they need now is aid in increasing their livestock base, aid in obtaining use of the limited supply of farm machinery . . . [and] perhaps one-half of these farmers will need varying degrees of supervision.<sup>19</sup>

The Farm Security Administration provided a most impressive demonstration of small farm production potentials during the growing season immediately following Pearl Harbor. Its 463,000 rural rehabilitation and tenant purchase borrowers who farmed both in 1941 and 1942 represented only 7.6 percent of all farmers in the country<sup>20</sup> and normally accounted for less than 3 percent of total agricultural production.<sup>21</sup> But in 1942, they contributed more than one-third of the nation's total expansion in milk production and approximately 10 percent of the country's increase in the production of eggs, beef, chickens, peanuts and dry beans.<sup>22</sup>

<sup>17</sup> *Joint Hearings on Reduction of Non-essential Federal Expenditures*, Part 6, p. 2053.

<sup>18</sup> *Senate Hearings on the Food Supply of the United States*, Part 1, p. 365.

<sup>19</sup> *Ibid.*, pp. 360, 364.

<sup>20</sup> *Senate Hearings on Agriculture Department Appropriation Bill, 1944*, p. 618.

<sup>21</sup> Based on testimony of Dr. N. G. Silvermaster, *Senate Hearings on Technological Mobilization*, p. 725. Also see *Senate Hearings on Food Supply of the U. S.*, Part 1, p. 365.

<sup>22</sup> *Senate Hearings on Agriculture Department Appropriation Bill, 1944*, p. 618.

While many larger operators had trouble finding labor or machines to milk the 20 or 30 cows they had already, small farmers were finding that they could readily milk four cows instead of two, and keep 6 pigs instead of 3. They had plenty of labor and plenty of will to work. In 1943, Farm Security Administration rural rehabilitation loan clients who had also farmed in 1942 surpassed even their record production levels of the preceding year by such wide margins as the following: milk, 18 percent; eggs, 32 percent; chickens, 47 percent; hogs, 56 percent; cattle and calves, 43 percent; sheep, 30 percent; soybeans, 37 percent; peanuts, 22 percent; and Irish potatoes, 65 percent.<sup>23</sup>

Those bankers who glossed over the production potentials of small farms erred seriously. As shown in Table 34, it was estimated that the 2,940,000 such farms whose production could have been expanded within one year were capable of expanding the nation's milk production by twice the volume of increase sought from our total farm establishment during 1943. These farms could also have contributed more than two-thirds of the total increase in chicken and egg production planned by the Department of Agriculture. Yet the greatest single factor in continuing the under-utilization of these resources was an insufficiency of appropriate kinds of credits.

TABLE 34  
POTENTIAL PRODUCTION INCREASES ON SMALL FARMS, 1943  
For 2,940,000 small farms capable of expanding output within one year

Product	National increases sought by 1943 production goals	Increases available from small farms	Ratio of potential small farm increase to national increase sought
Milk, pounds .....	2,588,000,000	5,076,000,000	196%
Pork, pounds live weight .....	5,794,839,000	1,213,000,000	21%
Beef, pounds, live weight .....	2,036,164,000	274,000,000	14%
Chickens, pounds live weight ..	305,106,000	206,000,000	68%
Eggs, dozen .....	348,121,000	334,000,000	96%

Source: Data presented by Farm Security Administration in *Senate Hearings on Food Supply of the U.S.*, Part 1, p. 366.

In view of the failure (actually inability) of private facilities to meet these non-recourse type needs, it was all the more important that government credit resources be fully harnessed to the task. Nevertheless, but little was accomplished. After a slow beginning in 1941 and some further modest gains in 1942, the program of providing credit assistance to small farms suffered a sharp setback in 1943. The four Federal and affiliated

<sup>23</sup> Farm Security Administration, *1943 Food Production of Active Standard R. R. Borrowers Who Farmed in 1942 and 1943*, March 31, 1944, pp. 4, 10.

credit institutions whose functions and facilities could most readily have been adapted to such war purposes were the Production Credit Associations, the Farm Security Administration's rural rehabilitation program, the Emergency Crop and Feed Loan office of the Farm Credit Administration, and the Regional Agricultural Credit Corporation, of which some mention has already been made. In 1943, with the need for expansion greater than ever, the total amount of the loans made by these four agencies increased by nearly 12 percent over the preceding year, but the number of loans made declined not only below the 1942 level but even below that for 1940. Moreover, in 1944, with the mobilization drive approaching its climax, both the amount and the number of loans made by these agencies contracted sharply, the total number made falling short of the 1940 figure by fully one-third. The amount of loans made recovered slightly in 1945, but failed to reach even the total recorded in 1942.

C. B. Baldwin, head of the Farm Security Administration, was but one among those who called attention to the fact that the kinds of credit offered by the Production Credit Associations would have met precisely the needs of many of these small farmers.<sup>24</sup> Nevertheless, the number of such loans issued annually rose by only 5,000 between 1940 and 1942, dropped to below the 1940 level in 1943, and declined even more rapidly during the following year. This failure to maximize aid to small farmers was not dictated by a shortage of available credit funds, for the total amount of such loans increased in every year during 1940-45, with the exception of 1944. The additional funds were used, however, not to increase the number of beneficiaries, but rather to raise the average size of loans from about \$1,500 in 1940 to more than \$2,200 in 1944.

Only those farmers are eligible for emergency crop and feed loans who are "unable to procure loans from other sources in amounts reasonably adequate to meet the needs for which such loans may be made as authorized by law."<sup>25</sup> Even the Joint Committee on the Reduction of Non-essential Federal Expenditures, which had certainly not been unduly favorable to the extension of government credit facilities, recommended to Congress the enlargement of "the statutory authority of the emergency crop and feed loan program of the Farm Credit Administration . . . in order to provide credit for farmers when such a need is required in furtherance of the war food production program."<sup>26</sup> In actuality, the

<sup>24</sup> *Senate Hearings on Food Supply of U. S.*, Part I, p. 360.

<sup>25</sup> Farm Credit Administration, *Eleventh Annual Report, 1943-44*, U. S. Government Printing Office, 1944, p. 37.

<sup>26</sup> *Additional Report*, Senate Document 20, 78th Congress, 1st Session, U. S. Government Printing Office, 1943, p. 2.



TABLE 35  
FEDERAL CREDITS FOR FARM PRODUCTION PURPOSES, 1940-45 <sup>1</sup>  
Number and Amount of Loans Made Annually

Year	Production Credit Associations		Regional Agric. Credit Corporation		Farm Security Admin. Rural Rehabilitation Loans		Emergency Crop and Feed Loan Office		Total	
	Number	Amount (\$1,000)	Number	Amount (\$1,000)	Number	Amount (\$1,000)	Number	Amount (\$1,000)	Number	Amount (\$1,000)
1940	230,652	347,231	.....	4,804	303,355	94,580	158,036	18,960	692,043	465,575
1941	231,764	415,112	.....	6,759	353,848	113,727	144,193	17,177	729,805	552,775
1942	235,741	474,048	....702	7,759	408,029	110,764	137,352	18,730	781,824	611,303
1943	230,164	497,178	109,667	73,254	231,503	124,218	114,935	17,857	686,269	712,507
1944	217,739	485,750	3,932	16,427	146,381	64,883	93,865	17,081	461,917	584,141
1945	.....	509,579	1,615	9,646	.....	75,720	78,764	15,850	.....	610,795

<sup>1</sup> Continental U.S. only.

Source: Loans by Production Credit Associations, Emergency Crop and Feed Loan Office and Regional Agricultural Credit Corporation: data for 1940-44 supplied on request by Washington office of Farm Credit Administration; data for 1945 from *Agricultural Statistics—1946*, pp. 608-9, 627-8, 628-9. For Farm Security Administration rural rehabilitation loan data, see: *Agricultural Statistics—1944*, pp. 485, 487 (for data on loans to territories in 1942, see *Agricultural Statistics—1943*, p. 445); *Agricultural Statistics—1945*, pp. 504-5; *Agricultural Statistics—1946*, pp. 612-3.

loans made by this agency in 1942 were fewer in number and lesser in amount than in 1940. Moreover, both the number of such loans and their total amount were cut still further in 1943, again in 1944, and once again in 1945.

Secretary of Agriculture Wickard re-emphasized before Congress in mid-1943 that:

there are about one and one-half million small farmers who are not now FSA borrowers but who have the land and labor to produce more food. This million and one half are in about the same situation as were the FSA borrowers before they received their loans. The two main things which stand between them and full production are lack of credit and their lack of capacity resulting from limited skills, poor health, inadequate marketing and production facilities, and similar causes.<sup>27</sup>

Rural rehabilitation loans were the Farm Security Administration's major instrument for aiding small farmers.<sup>28</sup> Eligibility for such aid was restricted to those "below the commercial credit level."<sup>29</sup> The number receiving such loans increased from about 300,000 in 1940 to slightly more than 400,000 in 1942. While such an increase was quite modest in comparison with the vast needs outlined by Secretary of Agriculture Claude R. Wickard, it was not unimpressive when contrasted with the minute gain in the number of production credit loans or with the actual decline in crop and feed loans during this same period. Thereafter, unfortunately, the total number of original and supplemental rehabilitation loans made declined precipitously, by more than 40 percent between 1942 and 1943 and by another 36 percent between 1943 and 1944. Some indication of the huge gap between needs in this area and the limited funds made available by Congress was provided by the following statement of Dillard B. Lasseter, Administrator of the Farm Security Administration:

In 1944, with a reduced loan authorization of \$67,500,000, a total of 60,281 applications were received for initial rehabilitation loans. Almost three applications were received for each loan which could be made from the funds available. In 1945, with a loan authorization of \$67,500,000, application for

<sup>27</sup> Statement by Secretary of Agriculture Wickard before the House Committee investigating the Farm Security Administration, Department of Agriculture news release, July 1, 1943, p. 6.

<sup>28</sup> For example, rural rehabilitation loans accounted for approximately three-fourths of the FSA outlays during the fiscal year 1942-43. (Farm Security Administration, *Annual Report—1942-43*, U. S. Government Printing Office, p. 8.)

<sup>29</sup> From statement by M. P. Braswell, Chief of the Rural Rehabilitation Division of the Farm Security Administration, *House Hearings on Agriculture Department Appropriation Bill, 1946*, Part 2, p. 553.

57,313 initial rehabilitation loans were received. Only 24,996 initial loans could be made with the funds available. A majority of those who applied for rehabilitation assistance in 1944 and 1945 were eligible for it. Less than half of them could be served.<sup>30</sup>

In the light of the foregoing, it is difficult to avoid the conclusion that credit inadequacies really did impede certain important sectors of agricultural mobilization. Moreover, these inadequacies remained of serious proportions throughout the period of the war.

Given the magnitude of United Nations food requirements, the serious financial risks facing farmers eager to respond to such needs, and the outright neglect of substantial small farm production potentials, it is astonishing indeed to encounter so unrealistic an appraisal of agricultural credit alternatives in the midst of war as was presented to the Joint Congressional Committee on Reduction of Non-essential Federal Expenditures by a group of bankers:

It is recognized that direct relief by the Government in times of serious economic stress may involve some granting of loans from public funds as a temporary emergency expedient. However, the continued practice in making uneconomic loans from public funds, without adequate consideration of the ability of the borrower to repay and with the losses socialized at the expense of the taxpayers, violates the principles on which credit rests and thereby endangers the foundation of a sound credit structure.<sup>31</sup>

Such dicta may have been warranted during periods of prosperity. However, they offered little constructive guidance toward expediting agricultural mobilization by meeting the need for loans with limited liability<sup>32</sup> and by enabling small farmers to fully employ their farm and labor resources. Referring to the latter problem alone, Secretary Wickard warned in 1942 that, "one-third or more of our farmers were wasting their labor, their time and their production."<sup>33</sup> But even up to the very end of the war relatively little had been done to halt such heavy losses.

<sup>30</sup> Farm Security Administration, *Extracts from House Hearings on the Agriculture Department Appropriation Bill for 1947*, U. S. Government Printing Office, 1946, p. 1.

<sup>31</sup> *Senate Document 20*, p. 9.

<sup>32</sup> The continued importance of this need is apparent from the fact that even in its program for 1945, the National Farmers Union included the following as one of its major recommendations, "Use of non-recourse loans as a risk sharing device in encouraging production of any necessary high risk crops needed for immediate production without resorting to undue price incentives." (*National Farmers Union 1945 Program*, National Farmers Union, Denver, 1944, p. 2.)

<sup>33</sup> Directive from Secretary of Agriculture to the Farm Security Administration, August 21, 1942. (*House Hearings on Agriculture Department Appropriation Bill, 1944*, p. 975.)

## 2. THE MOBILIZATION APPARATUS

A final major determinant of the adequacy of agricultural mobilization was the efficacy of the organizational machinery used to bring it about. Long handicapped by the fact that the volume and composition of its plantings is the outcome of decisions made by six million farmers scattered over the entire country,<sup>34</sup> agriculture faced a more complex organizational task in seeking to remold its production in accordance with the distinctive requirements of war than any other sector of the economy. The experiences of our numerous war agencies demonstrated abundantly how gigantic and time-consuming is the task of building an organization competent to administer functions even less varied, less complex and less dispersed geographically than those relating to the allocation of the nation's food production resources. Hence, this problem alone might reasonably have consumed many months, during which time the execution of a war food program would unavoidably have been held in low gear.

As a matter of fact, however, the outbreak of war found agriculture extraordinarily well organized to provide centralized direction for the expansion and conversion of its productive facilities. It possessed copious information about all phases of production, not only for the nation as a whole but for every rural county and, beyond that, for millions of the individual farms responsible for most of the country's agricultural marketings.<sup>35</sup> It had accumulated the experience of years of close working relationships between Federal and state agencies and almost the entirety of the farm population. The Department of Agriculture's far-flung network of field agents had already been extended to multiple coverage of every one of the more than 3000 rural counties in the United States. The establishment of production goals, the effectuation of policies governing what should be produced, in what quantities and where, and the exercise of vast powers over credit, marketing and prices—responsibilities which might well have been frightening on initial impact—had by 1940 become

<sup>34</sup> In explaining the new Agricultural Adjustment Act to the farmers of the United States, Secretary of Agriculture Henry A. Wallace stressed as one of its primary objectives, "to subdue the habitual anarchy of a major American industry, and to establish organized control in the interest of not only the farmer but everybody else." (Radio Speech, Farm and Home Hour, WJZ, March 18, 1933, quoted in *AAA Plowed Under*, Random House, New York, 1938, p. 28.)

<sup>35</sup> Ever since 1936, supervision of AAA program operations had called "for the establishment of bases and allotments for each farm, making modifications to meet unique individual conditions, checking the performance of each participating farmer to see that he has complied with the program, [and] computing payments for which each farmer is eligible." (Carl T. Schmidt, *American Farmers in the World Crisis*, Oxford University Press, New York, 1941, p. 200.)

continuing tasks for whose performance procedures had already been developed through the trial and error of field operations.

Thus, a process closely akin to mobilization had been under way in American agriculture since 1933. As a result, its organizational readiness to cope with war burdens surpassed even that of our military establishments. Viewed in the light of such inestimable advantages at the very outset, the extent of agricultural mobilization achievement during the war assumes an even more modest mien.

### *Administrative Organization in the Field*

The field programs of the Department of Agriculture were conducted through several distinct subsidiary agencies: The Agricultural Adjustment Administration, the Extension Service, the Farm Security Administration, the Farm Credit Administration and the Soil Conservation Service. Each of them, except the last, was operating in virtually every rural county in the country. Each of them had direct dealings with hundreds of thousands of farmers.

In his annual report for 1940, Secretary of Agriculture Wallace summarized the scale of AAA operations by pointing out that, "Each of the 3,022 agricultural counties in the United States has today a county AAA committee. There are approximately 9,000 county AAA committeemen and 6,000 alternates, and 72,000 community committeemen and 48,000 alternates. This makes an effective total force of 135,000 committeemen who constitute a great network of key leaders in agriculture. They form an experienced organization which can be of extraordinary value in peace or in war." . . . Moreover, "participation in the AAA programs was greater this year than previously . . . 6 million co-operated as compared with 5¾ million last year."<sup>36</sup> During that same year, the Extension Service "assisted altogether about 5½ million farm families,"<sup>37</sup> spread over more than 2,900 counties,<sup>38</sup> to raise their standards of "agricultural practice and of agricultural living."

Still in 1940, the Farm Security Administration was providing rehabilitation loans, grants, tenant purchase loans and other aids to more than 400,000 farm families throughout the rural regions.<sup>39</sup> Production credit loans and emergency crop and feed loans, both issued through the

<sup>36</sup> *Report of the Secretary of Agriculture, 1940*, pp. 29, 31.

<sup>37</sup> *Ibid.*, p. 175.

<sup>38</sup> *House Hearings on Agriculture Department Appropriation Bill, 1944*, p. 158.

<sup>39</sup> *Annual Report of the Administrator of the Farm Security Administration, 1940*, p. 6.

Farm Credit Administration, reached an additional 400,000 farmers during this same period, while the Federal Land Banks closed the year with more than one million mortgage loans to farmers outstanding.<sup>40</sup> In addition to these already functioning means for assessing farm resources, communicating with farmers and offering direct aid and guidance to stimulate mobilization, further facilities were provided by the initiation of County Land Use Planning in more than 1,400 counties,<sup>41</sup> and by the establishment of Soil Conservation Districts in 34 states.<sup>42</sup>

This highly developed organizational machinery, designed to carry out a complex program of interlocking economic and agronomic objectives, began to deteriorate in the late spring of 1941, as the changing conditions wrought by war rendered its old purposes less compelling and as a new program defining goals, motivations and means appropriate to emergent developments failed to materialize. During the subsequent two years, the agricultural field apparatus grew so loosely articulated and became so warped by conflicts (frequently encouraged by powerful extra-governmental interests) that at times it actually hindered the mobilization effort. Farmers were given more confused information and more contradictory advice from various official quarters than had been the case in previous years.<sup>43</sup> Furthermore, production increases generated by the strong desire of farmers to utilize long-impounded production resources were mistakenly attributed wholly to governmental requests for increases, thereby disguising a perceptibly lessened effectiveness in the War Food Administrator's control over the field operations of his subsidiary agencies.

If the challenge of mounting food demands and straitened resources was to be negotiated successfully, the field organization of the War Food Administration required coordination at the county, state and national

<sup>40</sup> *Annual Report of the Farm Credit Administration, 1940*, U. S. Government Printing Office, 1941, pp. 3, 6, 8, 14, 62, 91.

<sup>41</sup> *Report of the Secretary of Agriculture, 1940*, p. 81.

<sup>42</sup> *Ibid.*, p. 175.

<sup>43</sup> "A woeful lack of co-ordination and planning in carrying out these programs is evident to every farmer. On too many occasions one agency recommends an activity in conflict with that of another agency. Too many instances prevail where personnel is employed to accomplish an activity already embraced within the functions of another and existing agency. Farmers do not want numerous agents consulting them about farm programs. They want co-ordination of these efforts, consisting in administration without duplication and overlapping and, above all, administration with the least expenditure of Government funds." (From the statement of Edward A. O'Neal, President of the American Farm Bureau Federation in *House Hearings on Agriculture Department Appropriation Bill, 1945*, p. 1469.)

levels. More direct lines of authority and responsibility needed to be established between the Office of the Administrator and every county official so as to ensure wholehearted and effective execution of policies established by the Administrator; and the renewal and even the extension beyond previous levels of farmer participation both in policy-making and policy execution was likewise required.

#### *Horizontal Integration of Field Operation*<sup>44</sup>

Peacetime differences in operating objectives among these agencies, originally representing functional components of a larger framework of programmatic goals, gave rise to increasingly sharp conflicts and to increasingly serious gaps in the advice made available to farmers as the unifying framework of the peacetime farm programs gave way to war exigencies and went unreplaced.

Many officials, of course, encouraged the expansion of war crops in direct response to war requirements. But some continued to lay heaviest stress on soil conservation. Others emphasized the new opportunities for diversification. Still another group, concerned with the repayment of credits, reinforced the natural inclination to maximize current farm income. Those fearing post-war insecurity urged caution in borrowing and caution in making crop changes. Farmers facing these issues in the highly practical form of attempting to definitize their own farm plans were puzzled by the conflicting advice offered by various local officials responsible to the very same War Food Administration, advice that often reflected the long-hardened biases of each agency that even war urgencies had been unable to dissolve.

Much of the confusion in the field stemmed from the failure at the top level clearly to subordinate each agency's original objectives to at least an over-riding emphasis on expanding the production of essentials and reducing that of inessentials. In the spring of 1943, the AAA continued to issue acreage allotments for inessential short staple cotton which by their very nature were sure to absorb most of the time and resources of their recipients.<sup>45</sup> At the same time, the Farm Security Administration was campaigning vigorously to encourage greater attention to war food crops, and the Regional Agricultural Credit Corporation even withheld

<sup>44</sup> Most of the observations in this section are based on the results of a continuing series of field studies with which the author was associated in the Bureau of Agricultural Economics from the fall of 1939 to the summer of 1943.

<sup>45</sup> As a matter of fact, Secretary Wickard even announced on March 6, 1943 that farmers would be permitted to exceed their 1943 cotton acreage allotments by 10%. (Department of Agriculture news release, March 6, 1943.)

its attractive limited-liability loans from short-staple cotton production,<sup>46</sup> in order to stimulate shifts to other crops. To offset these possible pressures, however, neither the production credit loans nor the emergency crop and feed loans were hedged about with similar restrictions, although these, too, like the Regional Agricultural loans, were either issued or sponsored by the Farm Credit Administration. Then again, a substantial proportion of Extension and Soil Conservation Service officials avoided such embroilments by adhering steadfastly to their long range tasks, devoting little more than peripheral attention to current mobilization problems.

The absence of authoritative horizontal integration among these separate organizations occasioned losses even more serious than can be attributed to outright conflicts and neglect, however. The proper balancing of productive resources in relation to one another is the foundation of efficient food production. Yet, no means were established at the county level to ensure that the various Federal aids available to farmers would be tendered in a balanced relationship to one another and to the farmers' resources. Field operations provided relatively few illustrations where credit decisions, for example, were so closely geared in with labor, machinery, crop allotment, soil conservation and other decisions as to eliminate bottlenecks and waste by carefully balancing these production factors from farm to farm and from county to county. Most of these determinations were actually arrived at separately, by different people, at different times and according to often unrelated criteria. Nor did many officials feel that national policy directed any different course.

Incidentally, the retention of barriers among these programs also impeded the ready re-allocation of specially skilled personnel; it discouraged the elimination of unnecessary administrative disparities among agencies; and it prevented the centralization of certain functions common to all agencies.

There can be no doubt that the organization of county and state "Defense Boards," and later of War Boards, represented a genuine advance toward inter-agency coordination. But the continued absence of unifying objectives at the top policy levels of these agencies, plus the lack

<sup>46</sup> The "essential war crops" whose production might be financed by these loans were: "Soybeans, for beans; flax for seed or fiber; peanuts to be harvested and picked; Irish potatoes where farm goal is 3 acres or more; sweetpotatoes on farms with goals determined; American Egyptian cotton; hemp for seed or fiber; dry beans; dry peas (excluding wrinkled varieties); castor beans, tomatoes, snap beans, lima beans, peas and carrots for processing or sale fresh; cabbage, sweet corn and table beets for processing only." (Farm Credit Administration, *Food Production Financing Bulletin F-2*, April 5, 1943.)



of actually centralized authority locally, severely limited the integrative achievements of these committees. Each county official was still supreme in his own program bailiwick. Each was still forced by organizational and budgetary ties to be more responsive to the will of his agency superior than to that of his local colleagues in other branches of the field service. The resultant relationship was all too frequently of an order well characterized by the sharp reply of a local official to a question about whether his staff co-operated with the others in the county, "We co-operate all right, but that's all!"

### *Centralized Control and the Extension Service*

Despite the inevitable complexity of this administrative situation, it was possible to observe that one of the key issues whose reverberations did most to enhance farmer confusion and to undermine field operations was the resistance of large segments of the Federal-State supported Extension Service to Federal policies and authority.

A variety of explanations have been offered for the long history of friction between the Extension Service and the field staffs of the AAA and of the Farm Security Administration. Some have stressed differences in political party loyalties and in basic economic philosophies. Others have emphasized the inevitability of personal resistance to being "taken over" or to encroachments on one's hitherto exclusive preserve by large, well-financed, competitive new agencies. There has been evidence at times that such internal dissensions reflected and were even intensified by conflicts among non-governmental groups.<sup>47</sup> At any rate, hostility between the Extension Service and the relatively newer agencies flared up repeatedly both before<sup>48</sup> and after the signing of the "Mount Weather Agreement" on July 8, 1938,<sup>49</sup> which was expected to clarify Federal-State relations

47 To illustrate: "The fight in Congress over cutting from \$65,000,000 to \$27,000,000 an appropriation for moving farm labor goes deep into farm organization politics.... The Agriculture Department's Extension Service (Four-H Clubs, county agents, etc.) has always been considered an official adjunct of the Farm Bureau. The Farm Security Administration has played close to the labor-minded Farmers' Union. So when the \$65,000,000 request went to Congress, the Farm Bureau had its Capitol Hill surgeons prune from the bill most of the money destined for Farm Security." (*Business Week*, March 27, 1943, pp. 5-7.)

48 A variety of instances are presented with an objectivity and humor that few could summon during these crises by Russell Lord in his *Agrarian Revival*, American Association for Adult Education, New York, 1939, pp. 160-197.

49 The agreement and related documents are available in J. M. Gaus and L. O. Wolcott, *Public Administration and the Department of Agriculture*, Public Administration Service, Chicago, 1940, pp. 157-9, 463-475.

in the operations of the agricultural programs. As a result of these conflicts, the reluctance of a sizeable number of Extension officials to participate in officially authorized mobilization programs tended to reflect discredit on the Extension Service, as well as causing harm to the war food program.

The scope of these antagonisms may be indicated by citing a few illustrations relating to food production.<sup>50</sup> When the Secretary of Agriculture organized the state and county Agricultural War Boards to mobilize food resources, many Extension officials, especially in the Northeast, apparently ignored these official bodies of which they had been designated members. Instead, some helped to found rival "neighborhood leader" and similar groups, in effect duplicating various War Board purposes but neglecting the facilities of the FSA and the AAA.

Nor was it uncommon for Extension officials publicly to voice destructive criticism and disparagement of war food production policies, sometimes as wholly inadequate, sometimes as impossibly far-reaching, often simply as undesirable. Specific instances cited to the Senate Subcommittee on War Mobilization included discouragement of a government-proposed shift to longer staple lengths of cotton in the South Central region, discrediting corn and hog goals in the Mid-West, refusal to aid in expanding hemp production, and urging farmers to resist conversion from traditional crops.

Many Extension officials were also resistant to aiding Federal programs for mobilizing agricultural labor resources. Federal officials responsible for such activities reported, for example, that Extension workers failed to carry out the recruiting campaign for cannery labor in many areas in February, 1943, that they did not co-operate with the Agricultural Labor Administration in plans to mobilize more women workers, and that in several states they did not help to find jobs for farm laborers applying to them for work although other Extension officials were complaining of labor shortages at the very same time. Finally, Extension officials at the state and county levels were reported to have engaged frequently in open criticism of other agencies of the War Food Administration.

The war food program suffered great harm as a result of such internal dissension and conflict. Farmers were confused about the real character

<sup>50</sup> Materials bearing on these difficulties were submitted to the Senate Subcommittee on War Mobilization and were culled from newspapers and magazines by the staff. Nevertheless, specific citations are omitted in this one section lest really pervasive administrative issues be narrowly and perhaps even unfairly personalized by reference to a few randomly selected instances that were not directly investigated.

and the relative urgency of war needs. It was insinuated that sacrifices necessitated by country-wide shortages were really initiated for less defensible purposes. The morale and working impetus of field officials connected with the other food production agencies was undermined by this open defiance of Federal leadership. Disagreements among local officials became increasingly overt.

It is important to recognize that the delineation of respective authorities and responsibilities in joint Federal-State undertakings poses extremely complex problems toward whose solution we have progressed but slowly and with great pain. It must also be remembered, however, that this nation had denounced "non-cooperation" during the war as a weapon of coercion both by labor and by capital, and, hence, could not be expected to show tolerance for such tactics in the very machinery of government. In these circumstances, the disruption of wartime Federal policies by contending factions dependent on Federal funds through ties of employment constituted not only an abuse of the privileges of government service but a disservice to the nation.

#### *Local Participation in Mobilization Programs*

Experience with the agricultural control programs during the period 1933-40 demonstrated conclusively that widespread farmer participation in the development and execution of food production policies deepens their understanding and support even in the face of accompanying personal hardships. Yet farmers sensed an ebbing in such participation as the war progressed.

One of the most invaluable resources with which agriculture faced the tasks of mobilization was the extraordinary experience which farmers had acquired in adjusting the utilization of local resources to national requirements, in equitably prorating area quotas among all local producers, and in otherwise initiating and administering policies governing the economic activities of their communities. Summarizing the unique range and volume of such direct participation in economic self-government, Dr. Donald C. Blaisdell pointed out in 1940 that:

Farmers take part in large numbers in administering agricultural adjustment. They advise the Secretary on the tenant-purchase loan program. Initiation of measures for erosion control through soil-conservation districts is in the hands of farmers. Through referendums they decide whether marketing quotas shall be effective for basic agricultural commodities; whether marketing orders for milk, fruits and vegetables shall go into effect; and, in the tobacco markets, whether compulsory inspection shall be provided by the Government. In rural electrification, membership co-operatives led by farmer direc-

tors and trustees predominate. Farmer committees for agricultural land-use planning are growing in importance. . . . Probably not far from 1.5 million farmers are working with the Federal government in carrying out the many-sided farm programs. . . . Citizen-participation in public responsibility on such a scale is impressive evidence of interest in and ability to work with the government for the general welfare.<sup>51</sup>

By 1943 much ground had been lost since the heyday of grass-roots participation in the control programs referred to above. Farmers had come to feel less well informed about agricultural needs and resources, less closely identified with mobilization policies and more confused about the consistency of various Washington measures than at any time since the war had begun. Apparently, an increasing number of farmers were beginning to feel that their role had become wholly one of going along with whatever decisions were handed down. While the support of the large majority of working farmers had been retained, it was no longer marked by enthusiasm and, indeed, seemed susceptible to being molded into antagonism under the pressure of further burdens.

War measures multiplied the instances in which local officials unavoidably upset individual farm plans in the course of allocating short supplies of necessities. As these restrictions became more harassing, and as hostile rumors and arguments took root, the need grew for providing farmers with fuller information and explanations and for renewing and even extending their participation in planning and running the food program.

Local officials, too, felt increasingly isolated. They, too, were less promptly and less fully informed about changes in national requirements and about Washington policies and intentions. Many of them felt that they were no longer participants in policy-making and hence were less enthusiastic about and, at times, even cynical about "directives" from the capital.

Most farmers were too deeply committed to wanting to use their available resources with maximum war effect to ask that they "be left to their own devices." They realized the impossibility of six million independent decisions magically adding up to the wisest possible allocation of agricultural resources. They wanted not less guidance, but more. At the same time, however, they wanted to know why it would be advisable for them to act in accordance with government requests and they wanted to have a hand in deciding which of the practical alternatives would best suit their needs.

<sup>51</sup> Donald C. Blaisdell, *Government and Agriculture*, Farrar and Rinehart, New York, 1940, pp. 167, 182.

To have kept farmers properly informed about needs, correctly advised on technical problems, and in close association with policy formation, and to have kept ranking war food officials accurately and continuously in touch with field problems and achievements, would have required a major re-organization of the administrative apparatus of the War Food Administration. Subsidiary agencies reaching in parallel lines from Washington to thousands of counties would have had to be more tightly inter-knit into one straight-line organization directly responsible to the War Food Administrator. It should be realized that a substantial measure of the inadequacies of agricultural mobilization, whether in reference to the conversion of land use or to the redistribution of labor, machinery and fertilizer, was traceable to the loose-jointedness which was preserved in the mobilization machinery, partly by administrative inertia, partly by bureaucratic opposition to consolidation, and partly by the pressure of outside interests who sought to benefit from the resultant delays and ineffectuality.

### 3. SUMMARY FEATURES OF U. S. AGRICULTURAL PRODUCTION

Despite the self-laudatory note frequently sounded by mobilization officials and farm spokesmen on behalf of agriculture,<sup>52</sup> the advances that were achieved in the scale and composition of farm output during the years of the war must be noted as exceedingly modest whether in comparison with urgent needs or in comparison with practicable potentials.

It has been noted that the agricultural production plant had abundant resources which were under-utilized. Millions of acres of idle and fallow cropland and of plowable pasture were fit for more intensive war service. Even extravagantly cautious estimates indicated huge still unrealized potentials for increasing the volume of production by increasing yields per acre. Beyond that, it was considered possible to increase the production of needed nutrients by as much as 40 percent within two years,<sup>53</sup> not through any increase in the resources devoted to agriculture but by shifting production to the crops which most efficiently convert land, labor and other farm resources into essential nutrients. And the magnitude of these

<sup>52</sup> Note, for example, the following excerpt from the *Final Report of the War Food Administrator, 1945* (U. S. Government Printing Office, 1945, pp. iv, vi): "When the history of this war is written, one of the truly astounding chapters will be the story of how our farmers and ranchers overcame all obstacles to produce the needed food supplies ... they have earned the gratitude of the entire Nation for a production job beyond all expectations ... their production record has been magnificent."

<sup>53</sup> Estimated by Dr. Russell M. Wilder, Chief of the Civilian Requirements Branch, Food Distribution Administration in *Senate Hearings on War Mobilization, Part 2*, galley, p. SO 30.

relatively untapped potentials was swelled further by the production possibilities offered by hundreds of thousands of still unmobilized small farms.

To sustain such intensification of production, agriculture had at least 20 percent more manpower than was estimated to have been absolutely necessary, by far the greatest concentration of farm machinery in history, larger supplies of fertilizer than ever before, and practically unlimited credit facilities. A vigorous program to transfer available production resources from less essential to more essential farm enterprises and to promote the most effective possible utilization of such resources would have enabled agriculture to release a substantial volume of manpower, raw materials and industrial plant facilities to other sectors of the war economy, and, at the same time, to expand its own output heavily. Instead, mobilization efforts were allowed to be bound by an undue tolerance for the persistence of pre-war patterns of resource use. As a result, agriculture was forced both to resist actively any shifts of its resources to other employments and to depend on the fortunate accident of good weather to disguise its ineffective use of much of the resources which were retained.

In short, the pattern of wartime increases in agricultural production, showing gains by almost all groups with little regard for their relative essentiality or nutritional efficiency, bore fewer aspects of an orderly mobilization of scarce resources than of a pell-mell response to the removal of long-standing production restrictions combined with a general price boom.

In all fairness, however, these shortcomings in results should not be permitted to obscure or to detract from the extraordinary efforts to maximize their contributions made by millions of farm men and women working within the often confining limitations of a highly organized agriculture torn by conflicting pressures to convert further and to resist additional adjustments.

While the habits of production are no less tenacious than the habits of consumption, their roots lie far deeper than the realm of psychological inertia. Established production patterns are reinforced by the specialized equipment that farmers possess, by their knowledge and experience in handling accustomed crops and by the coercions of existing channels of marketing, credit and price. The individual farmer cannot always convert alone. His plans are molded by a complex of pressures beyond his control. Nothing short of a powerful, concerted effort by Federal agencies to blast away old economic ruts and to provide new alternatives and incentives which accorded with war objectives could have brought about the conversion of the whole of agriculture.

What farmers did contribute was forthcoming despite a paucity of clear-cut information about the relative essentiality of the various crops that most fields can grow, despite contradictions between Washington exhortations and current price incentives, despite the failure to so reallocate labor, machinery and fertilizers as to encourage further expansion of the most fruitful categories of production, and despite the government's continued failure to offer farmers the business-like terms, including production contracts, price commitments and safeguards against extraordinary risks, which governed the mobilization of industry.

An inordinate proportion of agricultural controversy and planning was conducted as though food problems could be insulated from the rest of this country's mobilization tasks. Had success crowned the vigorous efforts that were made to provide food production officials with broad authority over prices, machinery and manpower, independent of other agencies equally concerned with these resources and controls, the war effort might have been most seriously disorganized. Questions asking whether farmers really needed more labor or more farm machinery were actually far less relevant for purposes of national allocations policy than questions as to whether a given category of 200,000-500,000 men might better have been employed in growing surplus cotton, producing airplanes or filling army induction quotas, and whether the war effort was more in need of tractors than of landing barges or trucks. Agriculture had already been given unusual freedom during the early years of the war to pursue most of its requirements with minimum interference from other war agencies. The results hardly constituted a persuasive argument for extending the spheres of its autonomy,<sup>54</sup> yet such proposals continued to be pressed even on the eve of Germany's defeat.<sup>55</sup>

In order to expand the production of essential crops while reducing the output of others, to effect the redistribution of labor, machinery, ferti-

<sup>54</sup> In a public statement, based in part on consideration of the materials brought to his attention in the course of hearings on the food situation, Senator Harley M. Kilgore, Chairman of the Senate Military Affairs Committee's Sub-committee on War Mobilization, emphasized that, "It is clear that food production in this country and our policy regarding food production in other countries have not been considered as part of the over-all war strategy of the United Nations. Here again, this country, as in the case of war production and manpower allocation, has pursued a policy of piecemeal planning without balancing one program against another to assure an equitable distribution of materials and manpower for production and an intelligent program of consumption." (News release, August 20, 1943.)

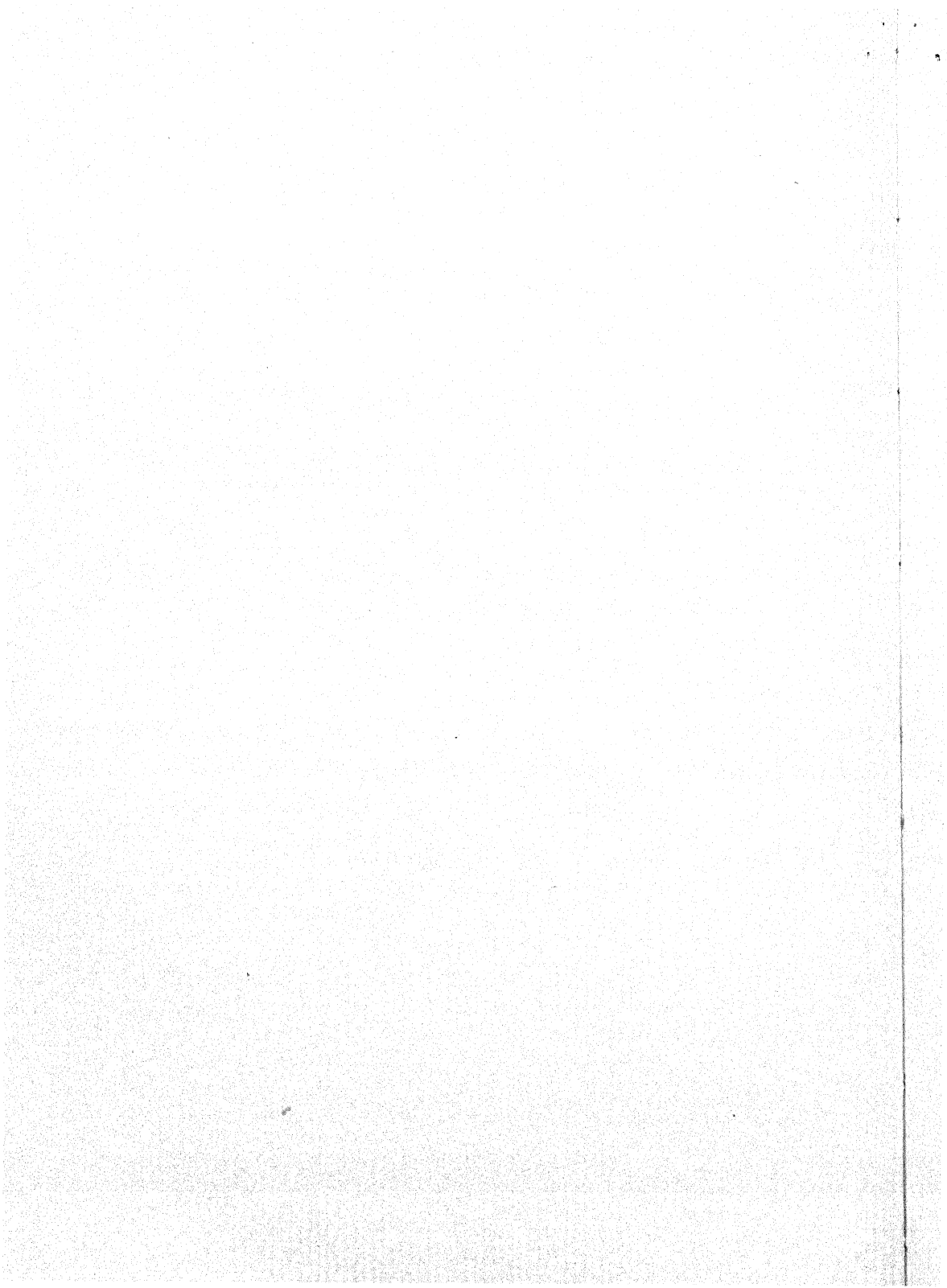
<sup>55</sup> Special House Committee to Investigate Food Shortages, *Food Shortages*, House Report No. 504, 79th Congress, First Session, U. S. Government Printing Office, 1945, p. 16.

lizers and credit, to heighten the efficiency with which these were applied to war purposes, and to release as much as possible of agriculture's transferable resources to other critical industries, a fuller integration of motivational tools and a renovation of mobilization machinery would have been necessary. Clear information and explanations should have been combined with incentives to reward extra undertakings, with penalties to discourage apathy and inertia and, perhaps, even with compulsions to prevent willful non-cooperation by a few—for no one of these tools could have been expected to carry the entire load. Also the substantial remains of agriculture's magnificent prewar field organizational machinery would have had to be reoriented in purposes, strengthened by consolidation and otherwise overhauled if it were to have provided adequate means for guiding agricultural mobilization. Unfortunately, however, these potentials not only continued to be unrealized during the later years of the war but even receded as the pressures for relaxing wartime controls gained increasing headway.



## PART C

### DISTRIBUTION OF U. S. FOOD SUPPLIES



## CHAPTER X

### SHARING WITH OUR ALLIES

THE determination of food allocations provided a strategic control point for integrating production policies with consumption policies on both the domestic and international levels. Appropriate allocations decisions were capable of at least minimizing the unfavorable effects on the Allied war effort of shortcomings in United States production. Of greater significance still, however, was the fact that vigorous employment of the allocation authority was capable of contributing heavily to battering down the inertia of long established production and consumption habits by confronting pleas for continued delay, moderation and caution with the already apparent serious consequences of past acquiescence to such proposals: inability to adequately satisfy the vital food needs of our allies and unpreparedness for preventing widespread, politically disruptive hunger in the wake of enemy retreats and collapse.

As has been noted in Chapter II, the greater part of the food burdens borne by the United States subsequent to 1940 were imposed not by direct enemy action depriving us of customary sources of supply but by the necessity both for sustaining the wartime strength of the armies and peoples arrayed with us and, thereafter, for hastening the recovery of nations suffering from war-engendered devastation and disorganization. Accordingly the most telling measure of the success of our domestic food mobilization efforts lay not in how high civilian consumption levels could be raised at home but rather in the scale of our aid to food-deficit areas.

The list of wartime claimants on United Nation's food supplies was a long one, representing in varying degrees the needs of several hundred millions of people. To satisfy such enormous requirements fully was patently beyond the utmost powers of any single nation. Faced by the fact that shortcomings in realized supplies relative to essential needs would entail desperate privations capable of endangering our most important wartime and peacetime objectives, it was imperative for our government not only to maximize this country's own contributions but to exercise the most vigorous leadership possible toward enlisting the active support of all other friendly governments in maximizing production in and exports from the remaining areas of the world capable of augmenting needed food supplies.

## I. THE ALLOCATION OF UNITED STATES FOOD SUPPLIES

American civilians were asked to share the nation's food supplies with our own armed forces, with the territories of Puerto Rico, Hawaii and Alaska, with our British and Russian allies, with other friendly nations cut off from essential imports, with European neutrals whose dependence on Axis sources it was necessary to undermine, and with the peoples liberated in the course of Allied military advances.<sup>1</sup> Although essential export requirements rose at a mounting tempo throughout the period of the war and even thereafter, it will be found from Table 36 that neither the proportion of United States supplies exported nor the total volume of such shipments followed a similar pattern.

During 1940, as during 1935-39, exports accounted for only between 2 and 3 percent of the total disappearance of United States food supplies, with virtually all of the remainder being consumed by domestic civilians. For the next three years, the domestic civilian share of the total declined steadily, reaching a low point of 78.9 percent in 1943. Because of the competing requirements of more necessitous claimants, allocations for commercial exports were reduced as well. On the other hand, allocations to the Army and Navy expanded rapidly—from less than one-tenth of one percent in 1940 to 11.7 percent in 1943—primarily to meet their subsistence requirements, but also including some provision for easing immediate civilian requirements in newly liberated areas. The remainder, rising from zero in 1940 to 8.1 percent in 1943, represented allocations for government-financed exports, consisting primarily of lend-lease aid.

During the remaining years of the war, however, these trends toward increasing the proportion of domestic food supplies contributed to the overseas war effort were not only curbed but actually reversed, despite the continued precipitous rise in urgent overseas needs. By 1945, allocations to domestic civilians had risen to 81.3 percent of the total food disappearance, allocations for commercial exports had almost recovered to the 1940 level, allocations for government-financed aid had declined by more than 40 percent, and even allocations for the armed forces had turned down from their 1944 peak.

Even the foregoing data tend to overstate the apparent degree of sacrifice imposed on domestic civilians by wartime allocations to other

<sup>1</sup> To the people in liberated areas, President Roosevelt pledged, at the time of the Allied invasion of North Africa, that, "no one will go hungry or without the other means of livelihood in any territory occupied by the United Nations, if it is humanly within our power to make the necessary supplies available." (Cited by Mr. E. R. Stettinius, Jr., in House Committee on Foreign Affairs, *Hearings on Extension of Lend-Lease Act, 1943*, U. S. Government Printing Office, 1943, p. 8.)

TABLE 36  
ALLOCATION OF U.S. FOOD SUPPLY, 1940-45

Year	Percentage Distribution of Allocations Each Year					Relative Amounts Allocated (All items as percentage of total food disappearance in 1940)				
	Total Food Disappearance	U.S. Civilians	U.S. Armed Forces <sup>1</sup>	Foreign Aid <sup>2</sup>	Commercial Exports	Total Food Disappearance	U.S. Civilians	U.S. Armed Forces <sup>1</sup>	Foreign Aid <sup>2</sup>	Commercial Exports
1940	100.0	97.8	...	0	2.2	100.0	97.8	...	0	2.2
1941	100.0	93.7	2.1	2.5	1.7	104.0	97.4	2.2	2.6	1.8
1942	100.0	86.3	6.5	6.2	1.0	113.6	97.9	7.4	7.1	1.2
1943	100.0	78.9	11.7	8.1	1.3	118.1	93.3	13.8	9.6	1.5
1944	100.0	80.3	12.7	5.8	1.2	124.7	100.2	15.8	7.2	1.5
1945	100.0	81.3	12.2	4.4	2.1	123.6	100.6	15.1	5.3	2.6

<sup>1</sup> Including provision for military feeding of civilians abroad.

<sup>2</sup> Allocations to Department of Agriculture for foreign aid, principally lend-lease. Actual shipments accounted for the following percentage of total food disappearance: 1941-2.3; 1942-5.2; 1943-7.1; 1944-6.5; 1945-4.8. The difference between allocations and actual shipments represented net increases in Department of Agriculture stocks during 1941-43 and net decreases thereafter.

<sup>3</sup> Less than one-tenth of one percent.

Source: *The National Food Situation*, September 1946, p. 8.

claimants. Actually, the volume of food available for allocation grew steadily during 1940-43 with the result that, despite a progressive reduction in its share of the total, civilian food consumption in 1942 was even greater than in 1940; and in 1943 it was less than 5 percent below the 1940 level. Furthermore, the numbers sharing this allocation were reduced by the heavy expansion in armed forces personnel. Hence, although per capita civilian food consumption was higher in 1940 than ever before in our history, this peak was exceeded in 1941, again in 1942 and even in 1943 when civilian sacrifice in respect to total food consumption reached its wartime peak.<sup>2</sup> During 1944 and 1945, food allocations to domestic civilians rose substantially as a result of increases not only in the share of the total granted to civilians, but also in the total food supply available for allocation. Accordingly, per capita civilian food consumption established new all-time records in 1944 and again in 1945.<sup>3</sup>

#### *Allocations to Our Armed Forces*

The volume of food made available to our armed forces rose, of course, throughout the period of hostilities. Such allocations were designed primarily to parallel the expansion in the numbers under arms, as well as to make possible the establishment and maintenance of the long pipelines necessary to supply increasing forces of American troops overseas. In addition, however, these allotments also included provision for the subsistence of prisoners of war to be fed from army stores pending their transfer to other sources of supply, and for augmenting civilian food supplies in liberated areas so long as strategic considerations necessitated the continuance of military control.

It may occasion some surprise to learn that it had been fully intended that the military should be saddled with such vexing non-combatant responsibilities even long after the front lines were pushed further forward. The reason for this policy was explained by Assistant Secretary of State Dean Acheson as follows:

... that no international organization or civilian organization should be allowed to go into any area which is a scene of military operations until asked to do so by the military authorities. . . . If military operations are going on, not only the whole area where the operations exist, but all supply lines lead-

<sup>2</sup> The index numbers of per capita civilian food consumption, based on the 1935-39 average as 100, were 105 in 1940, 108 in 1941, 107 in 1942, and 106 in 1943. (*The National Food Situation*, November-December 1945, pp. 12-13.)

<sup>3</sup> The index numbers of per capita civilian food consumption, based on the 1935-39 average as 100, were 111 in 1944 and 112 in 1945. (*The National Food Situation*, September 1946, p. 5.)

ing to such military areas, whether on ocean or land, and all port facilities and transportation facilities must be in the control of the military, and nobody else should be shipping anything or administering anything or in any way interfering with those operations until they are asked to do so.<sup>4</sup>

In order to safeguard the continuity of food receipts by troops stationed abroad, the service establishments had to accumulate reserve stockpiles all along the domestic and overseas supply lines. Under the conditions relating to production, transportation and war attrition risks which prevailed in 1943, the War Department deemed it essential to establish an array of depot stocks, pipeline supplies and contingency reserves containing amply sufficient food supplies to fill all military requirements in forward areas for about nine months.<sup>5</sup> Such requirements may have been further increased with the approach of the climactic phase of combat operations, involving further increases in the number of troops engaged abroad, as well as in the length of communication lines.

Provision for the foregoing is reflected in the fact that the 450 percent increase in military and naval personnel between 1941 and 1943<sup>6</sup> was accompanied by an increase of some 525 percent in total food allocations, although neither the number of prisoners of war nor the needs of liberated areas had yet reached significant proportions. With American servicemen as the chief claimants in this category, such food allocations necessarily had to accord with dietary preferences closely similar to those of civilians. Combining the foregoing with the fact that the armed forces were granted the highest priorities on available food supplies helps to explain why, contrary to widespread lay opinion, service allocations were more frequently the cause of common retail shortages than lend-lease and other exports. For example, in 1943, the year of greatest relative pressure on civilian allocations from competing claimants, Table 37 reveals that the service establishments accounted for 11.7 percent of the total disappearance of United States food supplies but included within that total more than 20 percent of the available beef, canned and frozen vegetables, condensed and evaporated milk, cocoa, and canned fruits and fruit juices as well as more

<sup>4</sup> *House Hearings on Foreign Economic Administration Appropriation Bill for 1945*, p. 246.

<sup>5</sup> Major General E. B. Gregory, *Food for the Army*, mimeographed statement submitted to the Special Senate Committee to Investigate the National Defense Program, War Department news release, April 14, 1943, p. 4.

<sup>6</sup> Estimated average numbers in the armed forces each year: 1940—380,000; 1941—1,637,000; 1942—3,950,000; 1943—8,984,000. J. Frederic Dewhurst and Associates, *America's Needs and Resources*, Twentieth Century Fund, New York, 1947, pp. 690-692.

than 15 percent of the available dry beans, coffee and tea.<sup>7</sup> On the other hand, allocations for lend-lease and other foreign aid programs in 1943 were less than one-tenth as large as those for the armed forces in respect to all of the foregoing commodities except canned milk (where this ratio was one-fifth), canned fruit juices (where lend-lease allocations were almost as large as the services' allocation) and dry beans (where the lend-lease allocation was somewhat the larger). Lend-lease shipments were the primary cause of retail shortages only in respect to pork, eggs, cheese, fats and rice.

Those who were searching for means of easing domestic food shortages expressed skepticism on occasion about the justification for maintaining the per capita consumption of servicemen at 50 percent above the civilian average.<sup>8</sup> As a matter of fact, however, when such comparisons were properly restricted to male civilians in equivalent age groups, this differential was found to be only one-fourth, despite the more intensive physical exertions required of most soldiers and sailors.<sup>9</sup> Food wastage at service camps proved to be a more appropriate target of criticism. At a hearing before the Truman Committee, Major General E. B. Gregory, the Quartermaster General, admitted that food wastage had exceeded 20 percent and then reported the introduction of new control measures designed to reduce waste to only 5 percent.<sup>10</sup>

Oddly enough, although the proportion of our armed forces stationed overseas rose to a peak only after 1943, as did the claims on military supplies of prisoners and of civilians in liberated areas, increments in the volume of food allocated to the services during 1944 and 1945 failed to keep pace even with the sheer increase in service personnel. Thus, the average numbers in the armed forces exceeded the 1943 level by 27 percent in 1944 and by more than 26 percent in 1945.<sup>11</sup> But total food alloca-

7 A comparison of the basic components of U. S. army garrison rations in World War I and World War II, prepared by the War Department, emphasizes the very much lesser weight given currently to beans, potatoes, prunes and flour and the proportionately greater weight given to fruits, green and yellow vegetables, fresh milk, butter and sugar. (House Committee on Appropriations, *Hearings on Military Establishment Appropriation Bill, 1945*, U. S. Government Printing Office, 1944, p. 216.)

8 The averages cited most frequently were 3½ pounds daily for civilians and 5½ pounds daily for servicemen.

9 House Committee on Appropriations, *Hearings on Lend-Lease Supplemental Appropriation Bill, 1943*, U. S. Government Printing Office, 1943, p. 82.

10 *New York Times*, April 14, 1943.

11 Estimated average numbers in the armed forces: 1944 — 11,400,000; 1945 — 11,375,000. (J. Frederic Dewhurst and Associates, *op. cit.*, pp. 690-692.)



TABLE 37  
U.S. ALLOCATION OF SELECTED FOODS, 1943

Commodity	Units (Millions)	Total Disappearance	Percentage Distribution			Commercial Export
			Civilians	Armed Forces <sup>1</sup>	Foreign Aid <sup>2</sup>	
Beef .....	lb.	8,702	73.9	23.6	2.1	0.4
Pork (excluding lard) .....	lb.	13,366	70.1	10.4	19.2	0.3
Veal, lamb and mutton .....	lb.	2,245	82.5	10.1	7.1	0.3
Chicken and turkey (dressed weight) .....	lb.	4,263	95.4	4.6	0	0
Eggs, for consumption .....	doz.	4,743	78.6	8.2	12.8	0.4
All cheese, except cottage, pot, full skim, and baker's .....	lb.	1,070	61.1	12.0	26.6	0.3
Condensed and evaporated milk .....	lb.	3,240	74.3	20.8	4.0	0.9
Dried whole milk .....	lb.	137	35.8	25.5	29.9	8.8
Total milk for humans, including fluid milk and cream .....	lb.	118,095	83.8	9.1	6.8	0.3
Butter (fat solids basis) actual weight .....	lb.	2,019	75.6	13.0	11.1	0.3
Lard and rendered pork fat (fat content) .....	lb.	2,856	65.2	2.2	29.3	2.3
Margarine and other edible fats and oils (fat content) .....	lb.	3,271	76.8	5.4	16.1	1.7
Fresh fruits .....	lb.	17,354	90.3	6.0	0	3.7
Canned fruits .....	lb.	2,399	65.9	30.5	2.9	0.7
Canned fruit juices .....	lb.	1,589	54.2	22.8	21.0	2.0
Fresh vegetables .....	lb.	32,213	95.1	4.6	0	0.3
Canned vegetables (commercial pack) .....	lb.	6,251	69.8	28.0	1.4	0.8
Dry edible beans .....	lb.	1,928	56.5	18.2	23.4	1.9
Potatoes and sweet potatoes, including canned and dehydrated .....	bu.	398	85.8	12.4	1.0	0.8
Canned soups .....	lb.	708	96.9	1.4	1.6	0.1
Sugar, raw value (thousands of tons) .....	...	6,790	82.0	10.7	7.0	0.3
Wheat, for human food .....	bu.	594	84.2	5.9	9.9 <sup>3</sup>	3
Rice, rough .....	bu.	56	50.0	4.3	45.7 <sup>3</sup>	3
Coffee (green bean basis) .....	lb.	2,027	83.5	15.8	0.3	0.4
Tea .....	lb.	78	76.9	19.2	1.3	2.6
Cocoa beans .....	lb.	544	68.4	30.2	0	1.4

<sup>1</sup> Including provision for military relief feeding.

<sup>2</sup> Allocations to Department of Agriculture for aid to our allies, almost entirely lend-lease. Actual shipments were one-eighth less than the total allocation.

<sup>3</sup> Lend-lease and commercial exports combined.

Source: *The National Food Situation*, July 1945, pp. 27-48.

tions to the Army and the Navy exceeded 1943 levels by only 14 percent and 9 percent respectively during the succeeding two years.

### *Allocations for Export*

Table 36 reveals that, as already indicated, total allocations for export, including both commercial shipments and government-financed foreign aid programs, absorbed an increasing share of the nation's aggregate annual food disappearance during 1940-43. Even at their wartime peak in 1943, however, such allocations accounted for no more than 9.4 percent of the total. This degree of sharing cannot but appear restrained in the perspective of the harsh shortages being suffered in the areas dependent on United States supplies. The liberality of such proportionate allocations also compares unfavorably with this country's achievement during the earlier world war when, although agricultural production per capita was below recent levels,<sup>12</sup> "we exported 16.6 percent of our total food supply (in 1917) . . . 20 percent in 1918 and 24.4 percent in 1919."<sup>13</sup> Nor is there much cause for gratification in recalling that the share of available United States supplies made available to food-deficit areas actually declined significantly in 1944 and again in 1945,<sup>14</sup> in the very face of increasingly desperate requirements.

The lend-lease program was, of course, the major factor in export allocations of food, accounting for about 60 percent of the total in 1941 and about 85 percent in 1943. Analysis of the composition of lend-lease food shipments in 1943,<sup>15</sup> when such aid reached its highest level, demonstrates that more than three-fourths of the total tonnage was composed of canned and cured pork, canned and dried milk, fats and oils, dry beans and peas, wheat flour and sugar. Other commodities of which large quantities were shipped included dried prunes and raisins, dried eggs, canned fish, milled rice and soybean products. Further confirmation of the comparatively moderate impact of lend-lease exports on domestic civilian consumption is provided by the data presented in Table 37 on the proportion

<sup>12</sup> Comparable indices of U. S. food production per capita for the periods 1914-1918 and 1939-43, with 1940 equal to 100, reveal that output fluctuated between 94 and 102 during the first World War, and averaged 97.2, while output rose steadily during the present conflict from 96 to 115, and averaged 105. (*The National Food Situation*, September 1943, p. 17.)

<sup>13</sup> *Eleventh Report to Congress on Lend-Lease Operations*, U. S. Government Printing Office, August 1943, p. 30.

<sup>14</sup> Commercial exports together with allocations for government-financed foreign aid programs accounted for 9.4 percent of total U. S. food disappearance in 1943, for 7.0 percent in 1944 and for only 6.5 percent in 1945. (Table 36.)

<sup>15</sup> U. S. Department of Agriculture news release, February 28, 1944.

of the total available supply of various foods allocated for such aid. Thus, in 1943, lend-lease accounted for only some 2 percent or less of the disappearance of United States supplies of beef, veal, chicken and turkey, of fresh, canned and frozen vegetables (including Irish potatoes and sweet potatoes as well as canned soups), of fresh and frozen fruits, of fluid milk and cream, and of coffee, tea and cocoa. Lend-lease takings of condensed and evaporated milk and of canned fruits aggregated less than 4 percent of the available supply, and came to but 7 percent in the case of sugar. Turning to the proportionately heavier allocations, we find such shipments withdrawing between 9 and 13 percent of United States supplies of wheat products, butter, lamb and mutton, and eggs, about 16 percent of our edible vegetable fats and about 19 percent of the pork supply. Only in the cases of cheese, dried whole milk, lard and rendered pork fat, canned fruit juices, dry beans, canned fish and rice were foreign claimants granted 20 percent or more of total United States allocations.

Even if the scale of the above allocations were a true representation of the sacrifices required of civilians in order to aid our allies, it would hardly indicate that severe hardships had been imposed by lend-lease shipments. Actually, however, as has already been noted, the expansion of total food production was sufficient to offset most of the above increases in the relative share made available for export. On the other hand, one graphic index of the effects of failing to press for somewhat further sacrifices is provided by estimates that total shipments during the fiscal year 1943-44 fell more than five billion pounds short of meeting even the export requirements which were finally submitted to the United States,<sup>16</sup> after foreign needs had already been squeezed to rockbottom levels, and after other friendly nations had already applied their exportable supplies to the reduction of such deficits.<sup>17</sup> It only remains to add that, although

16 A comparison of food shipments during the fiscal year 1943-44 with the statement of requirements compiled by the Requirements and Allocations Control Office of the War Food Administration as of June 30, 1943 indicates that the former fell short of the latter by considerably more than 5 billion pounds, with dairy products, meats and eggs among the largest of these deficiencies. By way of further emphasizing the extent of this gap, it should be noted that the above requirements made only minimal allowances for liberated areas and none for aid to India or for stockpiling in anticipation of the heavy demands bound to arise in the Far East.

17 "Our allies are just as mindful as we are that we must look out for our own people. They have been extraordinarily reasonable in adjusting their requests to our supply situation." (Secretary Wickard in *House Hearings on Extension of Lend-Lease Act*, 1943, p. 139.)

"In most cases, the figures [on United Nations' requirements] are really less than they should be because the requirements of the various deficit countries have been scaled

the United Nations' requirements continued to rise during 1944 and 1945, total food allocations for government-financed foreign aid programs are shown by Table 36 to have declined by one-fourth between 1943 and 1944, and to have declined by one-fourth again between 1944 and 1945 even though commercial exports were being materially expanded during this latter period.

*Division of U. S. Export Allocations Among Foreign Claimants*

By the end of 1943, \$2,590 million of foodstuffs had been exported on lend-lease account. Almost 93 percent of this total had been divided between the United Kingdom and the Soviet Union, in the ratio of approximately 2½ to 1, respectively. Shipments to Africa, the Middle East and the Mediterranean area accounted for an additional 5 percent, with the small remainder consigned to Australia, New Zealand, India and scattered groups of Polish, Greek and Yugoslav refugees.<sup>18</sup>

While the quantities represented by these sums might seem large in comparison with United States food exports during the years immediately preceding the outbreak of war,<sup>19</sup> they were actually sufficient to provide only small, though strategically important, additions to the consumption of recipient nations. Even in the case of the United Kingdom, the heaviest beneficiary of all, especially on a per capita basis, lend-lease exports provided but 10 percent of the total caloric value of foodstuffs available for consumption.<sup>20</sup> It is only against the background of war-induced deprivations in allied territories that the importance of lend-lease aid can be most clearly appraised and with it the seriousness of inadequacies in such shipments.

As noted in Chapter II, the British effected an impressive increase in domestic food production, expanding the output of wheat, potatoes and green vegetables by more than two-thirds. Domestic harvests were further augmented by substantial imports from a variety of foreign sources outside the United States, including Canada, New Zealand, Australia and

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down to bear some realistic relation to available supplies." (L. A. Wheeler, Director of the Office of Foreign Agricultural Relations, in *Senate Hearings on War Mobilization*, Part 2, galley, p. KH27.)

18 *Fourteenth Report to Congress on Lend-Lease Operations*, U. S. Government Printing Office, March 1944, p. 57.

19 Considering the 1926-28 average as 100, index numbers of the total quantity of agricultural exports excluding cotton dropped to an average of 51.3 during 1938-40 and then rose as follows: 1941-82, 1942-92, and 1943 (preliminary)-115. (*Agricultural Statistics-1946*, p. 443.)

20 *Report of the Secretary of Agriculture, 1945*, p. 5.

South America.<sup>21</sup> Despite the extraordinary efficacy of these production and procurement efforts, they yielded only slightly more than 85 percent as many food calories as had been available for consumption prior to the war. Lend-lease shipments raised this total to 95 percent in 1943.<sup>22</sup> But of even greater importance to the British war effort was the fact that such aid was effectively concentrated on offsetting the most serious deficiencies in the foods already available in the United Kingdom, thereby making it possible, through admirably efficient distribution controls, to actually improve the nutritional value of the average British diet over all previous levels.<sup>23</sup> Thus, the 2 percent of the United States supply of dairy products which was shipped to the United Kingdom in 1943 constituted 14 percent of the total supply there; our shipments of dried eggs more than doubled the total British egg supply; the 10 percent of our supply of edible fats and oils which was shipped in that same year accounted for 63 percent of the United Kingdom's supply; and the 6 percent of our fruit supply which was sent increased the United Kingdom's supply by more than 40 percent.<sup>24</sup>

Food shortages in the Soviet Union reached still more extreme proportions, while lend-lease aid was even more limited. Faced with the task of feeding a civilian population approximately three times that of the United Kingdom,<sup>25</sup> and despite the loss of more than 40 percent of its pre-war food resources, the Soviet government found it necessary to reduce average civilian rations to about one-third below Britain's 1943 caloric level, and with much poorer nutritional balance.<sup>26</sup> Every category

21 *House Hearings on Extension of Lend-Lease Act, 1943*, p. 136.

22 Calories available for civilian consumption per capita per day decreased from the pre-war level of 2,984 to 2,827 in 1943. (Combined Food Board, *Food Consumption Levels in the U. S., Canada and the United Kingdom*, U. S. Government Printing Office, April 1944, Table 2.)

23 Especially heavy gains were effected in the available supply of vegetable proteins, calcium, iron, and critical vitamins. (*Ibid.*)

24 From testimony by Mr. Lee Marshall, Director of Distribution, War Food Administration in *House Hearings on Foreign Economic Administration Appropriation Bill for 1945*, p. 156.

25 Pre-war populations: U.S.S.R.—192 millions; U.K.—46 millions. A careful estimate issued early in 1943 placed the population of unoccupied Soviet territories at 116-120 millions, including the armed forces. (*The Food Situation, 1942-43, in Continental Europe, The Soviet Union, and North Africa*, p. 61.)

26 Lt. Col. Ralph W. Olmstead, Deputy Director for Supply, War Food Administration, testified in May 1944 that, "The occasional reports we have received over the course of the last 18 months have indicated a ration for civilians approximating 1,900 calories a day, and less essential civilians going somewhat below that. That is considered

of foodstuffs was in extremely short supply, including even grain and potatoes.<sup>27</sup> As a result of competitive claims and of other considerations bearing on the allocation of food and shipping, however, the value of lend-lease food exports to the U.S.S.R. up to the end of 1943 was only about one-sixth as great per capita as in the case of the United Kingdom. That such shipments to the Soviet Union were also restricted in variety is apparent from the report that almost 75 percent of the entire tonnage exported to that destination through June 30, 1944 was composed of grains and grain products, animal fats, canned and cured meats, and vegetable oils, with refined sugar accounting for an additional 16 percent of the total.<sup>28</sup>

Although a substantial flow of lend-lease food shipments continued up to the termination of the program, shortly after the cessation of hostilities, the pattern of distributing such aid remained closely parallel to that prevailing at the end of 1943. In a report issued subsequent to the surrender of Germany, the cumulative value of all foodstuffs exported on lend-lease account up to April 1, 1945 was placed at \$4,382 million. Of this total, approximately 90 percent had been divided between the United Kingdom and the U.S.S.R., in the ratio of 2 to 1, respectively; the areas bordering on the Mediterranean had been allotted somewhat in excess of 6 percent, or twice the proportion received by China, India, Australia and New Zealand; and the residual one percent was shared by all other participants.<sup>29</sup>

The development of effective policies relating to the allocation of foods for commercial distribution and for relief in liberated areas suffered from two sources of confusion. First, necessary uncertainties about the timing and locus of liberating military operations were permitted to obscure the certainty that total requirements would in any event be huge. Second, the realization that such requirements could not be expected to reach maximum levels until some time after the end of the war was permitted to

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to be almost a starvation diet. People can exist on it, but they cannot maintain health and productive energy." (*House Hearings on Foreign Economic Administration Appropriation Bill for 1945*, p. 165.)

For a somewhat fuller discussion of Soviet adjustments in food production and consumption, see Chapter II.

<sup>27</sup> For example, grain supplies during 1942 were estimated at not less than 20-30 percent below pre-war consumption levels. "The potato ration was discontinued in March [1942] because of lack of potatoes." (*The Food Situation, 1942-43, in Continental Europe, the Soviet Union and North Africa*, pp. 63-64.)

<sup>28</sup> *The National Food Situation*, June 1945, p. 19.

<sup>29</sup> *Nineteenth Report to Congress on Lend-Lease Operations*, U. S. Government Printing Office, May 1945, p. 54.

overshadow the fact that only a long period of steady accumulation offered any prospect of coping successfully with the anticipated scale of eventual needs. As a result, disputation about whether allocations for such purposes should be revocable or firm, about where such supplies should be stored, and about the agencies to be responsible for distributing them tended to divert attention from the continuing failure to pile up necessary reserves at a rate commensurate with prospective requirements.

Allocation policies during 1943 called for setting aside relatively small quantities of food for relief and rehabilitation contingencies on a quarterly basis and then, at the end of each period, reassigning whatever remained unused to more active claimants. The advantages of this procedure were said to be that frequent turnover prevented physical deterioration of stocks and that the periodic termination of allocations implemented the availability of reserves for whatever emergencies might arise. This general policy was formally applied to the problem of United States food allocations for liberated areas in a letter from Lend-Lease Administrator Edward R. Stettinius, Jr. to Herbert H. Lehman, Director of Foreign Relief and Rehabilitation Operations in the State Department, in response to the latter's request for the procurement of specified goods for rehabilitation account.<sup>30</sup> Neither the rotation of stocks in warehouses nor the recurrent review of unconsumed allotments invited disagreement. Governor Lehman himself endorsed the retention of flexibility in the allocation of reserves.<sup>31</sup> Less satisfactory, however, was the absence of equally effective controls to preserve a continuity of growth in total unexpended reserves comparable with the level and proximity of anticipated needs.

By the summer of 1943 the food requirements of liberated areas for the succeeding 12-18 months were already envisioned in enormous dimensions, whether expressed as full provisions for an estimated 40 million people or as partial rations for 160 million.<sup>32</sup> Allocations were for the first time projected on a significant, although still modest, scale: nearly 600,000 tons of dry beans, soybean flour and grits, and fats and oils, plus about 200,000 tons of canned milk, dried milk and cheese, and supplemented by about 200,000 tons of meat and canned fish.<sup>33</sup> Lest the adequacy of this

30 The exchange of letters, dated January 4 and 25, 1943, is included in *House Hearings on Extension of the Lend-Lease Act, 1943*, pp. 39-42.

31 Testimony of Governor Lehman in *Senate Hearings on the Investigation of Manpower*, Part I, p. 170.

32 For a fuller discussion of such estimates see Chapter II.

33 Tentative allocations as of June 30, 1943, Requirements and Allocations Control, War Food Administration.

one million ton allocation for a full 12 months be exaggerated, one might note that government officials estimated later in 1943 that Italy alone might require approximately 100,000 tons of food shipments *monthly* even when it was only half liberated.<sup>34</sup>

Not only were these initial annual allocations of limited proportions, but the actual quantities available for shipment to the liberated areas were bound to be further reduced by the quarterly reassignment of unconsumed reserves to other claimants, in most cases to the British.<sup>35</sup> In August, even these small and revocable allocations were cancelled by the War Food Administration on the grounds that the decision of the Combined Chiefs of Staff to retain military control over liberated areas for at least six months made it unfeasible to continue the assignment of firm allocations to the civilian rehabilitation authorities whose operations were thereby postponed for so long a period.<sup>36</sup> Such action was hardly consistent with the publicly unchallenged view that only a long period of accumulation could produce food reserves sufficient to meet the requirements that would be encountered in liberated areas even after the initial six months.<sup>37</sup>

Minimal liberated areas food requirements for 1944 were estimated in June 1943 as probably exceeding 9 billion pounds, or more than four times the magnitude of the annual allocations initially approved for such purposes at that time.<sup>38</sup> The current allocation patterns provided no means of filling such needs from current production. As for the status of reserve stockpiles from which such urgent necessities might have been met, the Director of the Food Distribution Administration explained that, "our trend has been to have smaller stocks instead of larger ones [during] the

34 These unpublished estimates were based on the assumption that some 12 million people would have to be provided with food. Looking further ahead, they estimated that perhaps 200,000 tons would be needed monthly to provide needed supplies for upwards of 25 million people when all of Italy was finally liberated. A report based on similar data appeared in the *New York Times*, December 28, 1943.

35 Reported by Dr. John M. Cassels, Director of Requirements and Allocations Control, Department of Agriculture, in personal interview, June 1943.

36 *New York Times*, August 15, 1943.

37 "In 1944 and in 1945, relief requirements are going to pick up and there will be considerably larger requirements than can be taken care of unless at the present time the United Nations begin to build up some reserves to take care of them." (Testimony by Leslie A. Wheeler, Director, Office of Foreign Agricultural Relations, on February 8, 1944 in *House Hearings on Agriculture Department Appropriation Bill, 1945*, p. 169.)

38 As of June 30, 1943, these totalled 9.5 billion pounds—composed of 4,180 million pounds of fats and oils, dry beans and cereals and flour, 2,140 million pounds of processed milk products and dried eggs, 1,900 million pounds of potatoes, fruits and vegetables, and 1,280 million pounds of meat and fish. (Unpublished data prepared by Requirements and Allocations Control, War Food Administration.)



last several years.”<sup>39</sup> Estimates of liberated areas requirements were reduced later in the year, largely in consideration of “supply realities.” Nevertheless, aggregate requirements for 1944, still computed on the assumption of providing for only the first six months after liberation, included more than 8 million tons of foodstuffs and more than 1 million tons of oilseeds, fats and oils, even without counting the continuing needs of the allies or the needs of Italy and other enemy areas.<sup>40</sup>

The emphasis on preventing the “immobilization” of stockpiles and the readiness to reassign reserves to whatever emergencies were currently most pressing had the admitted advantage of minimizing further levies on already restricted food supplies being made available to civilians and to lend-lease recipients. But such policies also served to compound the potential impact that accelerated military advances would have on these very consumers. Throughout the war, time was one of the most desperately sought after of mobilization assets. Only in respect to food had expected crises been sufficiently delayed to allow for effective preparation. By submitting to insistent pressures for “consumption now,” however, and by thus denuding the larder during the very period miraculously granted for provisioning it, much of the advantage of this respite was dissipated.

It is obvious that the War Food Administration was correct in contending that it could not set aside food reserves for liberated areas “without cutting civilian consumption in this country or allocations to the British or Russians.”<sup>41</sup> But, short of such adjustments, stockpiling possibilities were confined to amassing some fish oils, dehydrated soups, and vegetable seeds, in addition to whatever wheat stocks were still available.<sup>42</sup> These represented comparatively meager weapons on which to risk our bitterly purchased opportunity to help effect a rapid and stable organization of a hungry Europe.

In time, of course, the pressure of absolute necessity forced the introduction of some further measures. Nevertheless, the basic pattern of belatedness and inadequacy in United States supply preparations for helping

<sup>39</sup> Testimony of Roy F. Hendrickson, *Senate Hearings on War Mobilization*, Part 2, galley, p. KH10.

<sup>40</sup> *Business Week*, November 20, 1943, p. 38.

<sup>41</sup> Statement of the War Food Administration quoted in the *New York Times*, August 15, 1943.

<sup>42</sup> Testimony of Roy F. Hendrickson, *Senate Hearings on War Mobilization*, Part 2, galley, p. KH10. It may be observed in this connection that U. S. wheat stocks as of July 1 reached a peak of 632.1 million bushels in 1942 but had dropped to half that level by the middle of 1944, even before liberated area requirements had reached significant proportions. (*The Wheat Situation*, November-December 1945, p. 13.)

to meet the requirements of liberated areas continued. Although the United Nations Relief and Rehabilitation Administration had been established under United States leadership on November 9, 1943,<sup>43</sup> it was officially reported that 15 months later, as the war in Europe was ending, this country had, as yet, contributed only one-third of the funds which it had pledged to UNRRA, and had shipped less than 2 percent of its quota of foods and other relief supplies.<sup>44</sup> Actual exports of foodstuffs from the U. S. on UNRRA account rose substantially during succeeding months, their cumulative value rising to \$25.8 million at the end of June and to \$70.2 million by September's close.<sup>45</sup> Viewed in the perspective of total aid, however, it will be recalled from Table 36 that total food export allocations during the whole of 1945 fell short of 1944 levels not only in relation to allocations for other purposes but in absolute volume as well.

## 2. FOREIGN CONTRIBUTIONS TO THE FOOD SUPPLY OF THE UNITED NATIONS

Overly frequent references to the United States as not only the "arsenal" but also the "food larder" of the United Nations, combined with innumerable reports emphasizing the vast scale of lend-lease food exports, tended to foster the impression that this country was carrying the full weight of overseas food import requirements virtually singlehanded. This misconception was not only mischievous in belittling the contributions of others, but it also had the more serious consequence of impairing the development of further constructive policies and the will to see them through.

<sup>43</sup> The draft agreement providing for an international agency to administer relief and rehabilitation operations in liberated areas was drafted by the U. S. Government and circulated for consideration by the other United Nations in June 1943. The new organization was established with the signing of the agreement by the representatives of 44 nations in the White House. The first meeting of the UNRRA Council, composed of representatives of the signatory nations, was opened on November 11, 1943 in Atlantic City. Moreover, an American, the Honorable Herbert H. Lehman, served as Director-General of the agency from its establishment until the spring of 1946.

<sup>44</sup> *Third Report to Congress on U. S. Participation in Operations of UNRRA*, U. S. Government Printing Office, June 1945, p. 23. As illustrative of widespread newspaper comment on such lagging progress, see *New York Post*, April 26, 1945 and report headlined "UNRRA Sends Less Than Shipload in 1½ Years," in *Washington Daily News*, March 7, 1945.

<sup>45</sup> Based on mimeographed report, *U. S. Exports Under the United Nations Relief and Rehabilitation Program During September*, Bureau of the Census, December 12, 1945, p. 3.

*Food Exports of Other Friendly Nations*

As noted in Chapter II, Canada, Latin America, Australia, New Zealand, and certain areas in Africa were all important sources of food exports, even overshadowing United States contributions in a variety of categories. Table I showed that, in the estimated schedule of total exportable food supplies available to the United Nations during 1943, exclusive dependence on United States allocations was limited to canned milk, dried milk and dried eggs. In addition, however, this country provided approximately one-half of all dry beans and peas and dried fruits, 25-40 percent of the butter, cheese, rice, fish and meat, 8 percent of the fats and oils, and 4 percent of the wheat and flour. Hence, while no nation contributed more heavily than the United States, our role can most properly be envisioned only as that of the largest of a number of minority stockholders in the undertaking to provision the deficit areas of the United Nations.

Not only did the exports of these friendly nations help to ease the impact of Allied and liberated areas food requirements on farmers and consumers in this country, but the United States was itself a major beneficiary of such shipments. During 1943, our imports included 180 million bushels of grain, more than 4 million tons of sugar, 450 million pounds of meats and fish, 2.8 billion pounds of coffee, tea and cocoa, 28 million pounds of butter and cheese, and large quantities of fats and oils, dry beans and peas, vegetables and bananas. In the aggregate, these imports weighed more than 22 billion pounds and were valued at \$961 million,<sup>46</sup> thus representing a substantial offset to our lend-lease exports of food during that same year of about 10.5 billion pounds,<sup>47</sup> valued at \$1,542 million.<sup>48</sup> United States supply resources were also augmented by foods obtained through reciprocal aid from our allies, most of which conserved shipping as well as reducing the drain on the continental United States by being transferred directly to American troops in the field. As of January 1, 1944, Australia and New Zealand alone had provided more than 800 million pounds of food on this basis, including meat, dairy products, eggs, vegetables, fruits and cereals, and were then supplying more than 90 percent of the food needed for the American and other allied forces in the Southwestern Pacific theater.<sup>49, 50</sup>

<sup>46</sup>Based on table prepared by the Office of Foreign Agricultural Relations and printed in the *Congressional Record*, June 27, 1945, p. 6954.

<sup>47</sup>Department of Agriculture news release, February 24, 1944.

<sup>48</sup>*Congressional Record*, June 27, 1945, p. 6953.

<sup>49</sup>*Fourteenth Report to Congress on Lend-Lease Operations*, U. S. Government Printing Office, March 1944, pp. 25, 27, 47. By the end of 1944, such reverse lend-lease

These indications of the significant proportions assumed by wartime food imports are reinforced by published estimates of the Department of Agriculture in respect to the relative scale of United States imports and exports during 1940-45. By comparing both total imports and total exports, including commercial shipments as well as government-financed aid programs, with the total disappearance of United States food supplies each year, Table 38 reveals that while the average annual contribution of imports came to 5.0 percent, average annual allocations for exports actually came to no more than 5.6 percent. Even during the period of this country's active participation in hostilities, 1942-45, annual *net* exports averaged no more than 2.7 percent of total food disappearance. Such findings offer no basis for challenging the immense value of American aid to the desperately needy recipients; but neither do they offer much support to the claims of hurtfully excessive generosity which were sounded repeatedly in opposition to the lend-lease and UNRRA programs.

TABLE 38  
COMPARATIVE SCALE OF U.S. FOOD IMPORTS AND EXPORTS, 1940-45  
All figures as percent of total U.S. food disappearance each year

Year	Imports	Exports <sup>1</sup>	Net Exports
1940 .....	5.5	2.2	-3.3
1941 .....	6.0	4.2	-1.8
1942 .....	3.8	7.2	3.4
1943 .....	4.9	8.4	3.5
1944 .....	4.8	7.0	2.2
1945 .....	4.8	6.5	1.7

<sup>1</sup> Exports include commercial shipments as well as government-financed aid programs. These data are the same as in Table 36.

Source: *The National Food Situation*, September 1946, p. 8.

### *Development of Foreign Food Resources*

It was estimated in Chapter II that even as late as 1943 the total exportable food supplies of the United Nations had not yet been expanded to a level equal to even one-half of estimated peak import requirements (excluding wheat, sugar and coffee from both demand and supply). In reviewing possible means of overcoming this huge deficit, attention had to be directed to the comparative under-development of most of the foreign agricultural resources accessible to the United Nations. Much could

food allocations from Australia and New Zealand had aggregated more than 2.6 billion pounds. (*Nineteenth Report to Congress on Lend-Lease Operations*, p. 38.)

50 It may also be of interest to note that other agricultural products listed as "Critical Commodities for Importation into the United States in 1943" included a variety of textile and cordage fibers, special oils, medicinals, hides, animal hair and bristles, vitamin concentrates, insecticides and others. (*House Hearings on Extension of Lend-Lease Act*, 1943, p. 281.)

still have been done in 1943 and thereafter to increase the production of essential foodstuffs in the U. S., Canada, Australia and New Zealand. Further expansion was taking place even within the highly mobilized United Kingdom. But more was needed than was likely to accrue from such efforts. Furthermore, climatic limitations on the location of various types of crops also necessitated a wider dispersion of intensified production. And, finally, the sizeable manpower demands of agricultural production provided still another incentive for more thorough enlistment of those foreign soil resources which were amply provided with labor.

The distinctively war-induced interests of the U. S. in foreign agricultural production were guided at first by the need to find substitute sources of imports lost to enemy control. Given the uncertainty of the war's duration and the optimism about food supplies which was common during the early period of mobilization, U. S. activity in foreign areas was confined largely to spot purchases of desirable offerings. The shortcomings of such purely market operations, however, soon asserted the need for formal contracts prior to production, for prices sufficiently attractive to motivate more than customary plantings, for purchase commitments extending beyond one growing season, and for supplementary payments to defray special development costs. As development investments thus became a necessity, considerations of economy and of hastening the availability of needed crops finally prompted the initiation of surveys by the U. S. government of food production potentials in alternate foreign areas—an informational province hitherto virtually unexplored by American technicians.

Slow to get under way, the program of foreign agricultural development sponsored by the U. S. government gave promise of being materially accelerated during the middle of 1943 as the increasing urgency of requirements helped to stimulate the clarification of administrative responsibility for such activity. During the four months ending July 21, 1943, directives were issued by the War Food Administration for development projects in Central and South America, Africa and French Oceania which were adjudged capable of yielding nearly 2 million long tons of more than 30 different agricultural products, with an estimated value of \$228.3 million.<sup>51</sup> The most ambitious of these plans called for large vegetable oil and oil-seeds projects in Mexico, Brazil and Argentina, for the expanded cultivation of pulses in Chile and Brazil, and for a greater production of

<sup>51</sup> Letter to Senate Sub-committee on War Mobilization from Dr. Courtney C. Brown, Vice-President of the Commodity Credit Corp., July 21, 1943.

rice in Chile, the Dominican Republic and Ecuador. Nevertheless, even if this expanded program had been fully effectuated, which was not to be the case, the scale of the undertaking was still too restricted to prevent a continued widening of the gap between expected requirements and supplies.

Nor was the limited scope of such planning to be explained by an absence of additional practicable opportunities for expanding food production in areas accessible to the United Nations. The Board of Economic Warfare itself called the attention of Congress to other vast areas that could have been brought into fuller production:

On the continent of Africa—North, West and Equatorial Africa, Angola, the Belgian Congo, Mozambique (to this will be attached the island of Madagascar), Abyssinia and Libya...are considered to have important potentials for the production of peanuts, beans, peas, palm kernels and oil, as well as oil from other nuts. Dates and figs, and in irrigated areas, vegetables may be produced in quantities sufficient to supply military and civilian needs...

The Near East—Turkey, Iraq, Iran, Saudi Arabia, Syria and Palestine is an area of considerable promise, not only because of the diversity of foods which may be produced, but also because of the proximity of an important part of the European population to these producing areas. Beans, chickpeas, peanuts, sunflower seed, soybeans, rice, various vegetables and livestock products, as well as poultry products, olives, raisins, and other important fruits, may be produced in quantities sufficient to be of importance in easing the transportation and supply problem of the United Nations Armed Forces.<sup>52</sup>

This same report noted that important food production development opportunities were also to be found in Spain, Portugal, Spanish Morocco, Egypt, the Sudan, Uganda, Tanganyika, Kenya, South Africa and India, although responsibility for their realization rested primarily with the British. In addition, attention was called to a report by the U. S. Navy emphasizing the need to accelerate food development in the South Pacific using the enormous agricultural and fishing resources which were apparently available.

Shortages of seeds and implements, of distribution and collection facilities, and of internal and inter-continental transportation contributed but modestly to the check-reining of expansive development proposals. More influential as a determinant of action was the counter-balancing of fears of relatively immediate shortages against fears of more distant sur-

<sup>52</sup> House Appropriations Committee, *Hearings on National War Agencies Appropriation Bill for 1944*, Part 2, U. S. Government Printing Office, 1943, pp. 347-350.

pluses,<sup>53</sup> with the latter outweighed by the vividness with which their still recent consequences were remembered. Risks were involved in either course, for although expansion might in time have resulted in threats to the market security of hitherto dominant producing areas, delay was certain to endanger our ability to effect the economic and political stabilization of the liberated areas. Deference to war urgencies would thus seem to have counseled not only that the U. S. itself act more vigorously to bring greater foreign resources into intensive cultivation, but that this country also assume more active leadership in persuading other nations to join with us in stimulating integrated food development programs throughout the world.

U. S. achievements in foreign agricultural operations were also hindered by the absence of an authoritatively defined program of objectives and policies to guide the efforts of the numerous government agencies involved.

During 1943, five agencies associated with or included within the War Food Administration participated in foreign procurement and development: The Food Distribution Administration, the Office of Foreign Agricultural Relations, the Combined Food Board, the Commodity Credit Corporation, and the Committee on Foreign Purchase and Importation. Other agencies taking part in such programs included the War Production Board, the War Shipping Administration, the Foreign Economic Administration (previously the Board of Economic Warfare), the Coordinator of Inter-American Affairs and the State Department.<sup>54</sup> Considering the complexity of an administrative process which interlocks so many executive groups,<sup>55</sup> controversies about respective functions were remarkably few. Those that did arise seemed to be rooted, rather, in policy disagreements which led in turn to a challenging of the initial allocation of responsibilities. Perhaps the one difficulty which might be laid

<sup>53</sup> Illustrative of extra-governmental concern about the deterrent influence of such fears relating to possible surpluses was a vigorous editorial in the *Washington Post* (August 18, 1943) which, after emphasizing the inability of the U. S. alone to supply all foreign food requirements, asked, "Why have we failed, in these circumstances, to organize a truly international food-production program to meet a grave international problem? Are our officials afraid to face the competition in postwar years of extended agricultural resources in other countries?"

<sup>54</sup> For a more detailed discussion of these agencies and their functions, see the testimony of Dr. Courtney C. Brown, Vice-President of the Commodity Credit Corporation, in *Senate Hearings on War Mobilization*, Part 2, galley, pp. KH17-18.

<sup>55</sup> These relationships were simplified somewhat by the issuance of Executive Order 9385 on October 6, 1943, and by subsequent memoranda of understanding between the Foreign Economic Administrator and the War Food Administrator, clarifying the division of responsibility for foreign procurement.

to a lack of administrative clarity concerned the respective authorities of the State Department and of the economic agencies engaged in foreign operations in resolving issues closely intertwining political and economic considerations. Inasmuch as general administrative rules cannot but favor the political agency in jurisdictional disputes involving governmental undertakings in foreign lands, however, little more could have been contrived to ease such conflicts than to provide some readily available channel of recourse for economic agency officials to prevent the undue disregard of their recommendations by political officials.

Controversies about operating policies were more common, nurtured by the absence of authoritative guides. Differences concerned such issues as whether development efforts should be concentrated in established producing areas, or whether new ones, too, should be encouraged;<sup>56</sup> whether development projects should be limited to those expected to mature within one year, or two years or three years;<sup>57</sup> whether foreign price offerings should be restricted to pre-war patterns,<sup>58</sup> whether they should be restricted to domestic price ceilings,<sup>59</sup> or whether they should provide distinctly more attractive incentives than hitherto. Most of these disagreements actually stemmed from differing expectations regarding the scale of food requirements and the duration of the emergency. Although such eventualities defied accurate prediction, their disruption of current operations could have been terminated abruptly by the issuance of responsible official estimates to guide affected agencies.

Little indeed was needed to intensify U. S. foreign procurement and development efforts beyond the vigorous enunciation of that objective as

<sup>56</sup> See statement by L. A. Wheeler, Director of the Office of Foreign Agricultural Relations, in *Senate Hearings on War Mobilization*, Part 2, galley, p. KH28.

<sup>57</sup> Such terms of proposed development contracts as this were a frequent source of contention between the BEW and the CCC. (Personal interview with Edwin A. Gaumnitz, Special Assistant to the Executive Director of the Board of Economic Warfare, July 8, 1943.)

<sup>58</sup> British efforts to maintain pre-war price levels in their procurement of meat in Argentina reduced purchases so materially as to necessitate discussions with the U. S. leading to a revision of policy. (Personal interview with Roy F. Hendrickson, Director of the Food Distribution Administration, July 10, 1943.)

<sup>59</sup> "...we cannot, in these foreign markets, tie too closely into domestic price levels, and in some cases it is necessary to take a loss if you are to get the production." (Testimony by Dr. Courtney C. Brown, *Senate Hearings on War Mobilization*, Part 2, galley, p. KH19.)

An opposing viewpoint was expressed by Senator R. O. Brewster of Maine in attacking U. S. wheat contracts in North Africa offering 50-60 cents more per bushel than market prices in the U. S. (*Washington Post*, August 13, 1943.)



the U. S. goal which, within clearly specified limits, was to determine the utilization of all funds and personnel available to participating agencies. Such a binding decision would also have implemented American efforts to encourage other countries to join with us in expanding supplementary production. Even a primary concern for domestic welfare alone would have dictated an expansion of U. S. foreign development programs, for all shortcomings in total supply relative to requirements were certain to increase the pressure on allocations to U. S. civilians as well as to the Allies and the peoples of liberated areas.

Nevertheless, the relative disregard of foreign food development potentials which had characterized the early years of the war continued. A number of additional development programs were formulated during late 1943 and early 1944, and some were actually initiated in the field; but even these were drastically curtailed as a result of the strong views of ranking officials of the War Food Administration that the war would probably end in 1944, and that everything possible had to be done to prevent an immediate flood of food surpluses. As a result, "from the fall of 1944 to the spring of 1945, the basic operational policy of the Foreign Economic Administration's Office of Food Programs was founded upon commercial procurement, with no attempt to promote additional development programs."<sup>60</sup> Perhaps the most striking commentary on the woeful inadequacy of wartime efforts to promote needed food production abroad was that, as late as July 16, 1945, Secretary of Agriculture Clinton P. Anderson could in all seriousness propose a more "aggressive" policy on the importation of foods, whose distinguishing feature was to be that foreign countries and especially South American countries would now be told what U. S. requirements were so that they could plan to fill such gaps.<sup>61</sup>

### 3. THE CONTROL OF ALLOCATIONS

Few decisions were as influential in determining the content of future production and consumption policies as those which apportioned U. S. food supplies among the various domestic and foreign claimants. Extravagant allocations for export could have stripped this country bare without ever filling overseas needs; niggardliness in such allocations could not only have undermined the military strength of our allies and their faith

<sup>60</sup> Based on statements by Herbert W. Parisius and Harold B. Rowe, Director and Deputy Director, respectively, of the Office of Food Programs, Foreign Economic Administration, in a personal interview, September 1945.

<sup>61</sup> *Journal of Commerce*, July 17, 1945.

in our support, but could have relaxed the pressure for further mobilization of domestic resources. The artificial scaling down of foreign requests prior to their acceptance as "essential" could not but disguise the inadequacy of current supplies and hence justify the delay of efforts to intensify foreign food development activities.

Responsibility for the allocation of U. S. food supplies rested in the last instance with the War Food Administrator. Final action, however, was preceded by an intricate process of committee meetings, consultations and successively revised trial balances so as to adjust competitive claims to one another, to available supplies and to shipping limitations.

Foreign requirements were first submitted to the U. S. agencies which were to sponsor such claims before the Food Distribution Administration. Allied needs were originally collected by the Office of Lend-Lease Administration, screened for essentiality and for eligibility as lend-lease aid and then adjusted downward in accordance with the agency's budgetary resources. Commodities sought on a commercial export basis were screened by the Board of Economic Warfare for essentiality and for conformance with blockade and general export policies. Requirements for liberated areas were estimated directly by the Office of Foreign Relief and Rehabilitation Operations.<sup>62</sup> The needs of other overseas areas were presented by the Department of the Interior in the case of Alaska, Puerto Rico, and the Virgin Islands, and by the Rubber Reserve Company, Public Roads Administration and other government units in the case of offshore projects being financed by the U.S., and the Red Cross.

All of these claims, accompanied by appropriate explanations and justifications, were submitted to the Requirements and Allocations Control of the Food Distribution Administration. Domestic requirements were transmitted to the same body by the armed forces, by the Veterans Administration and by the Civilian Food Requirements Branch of the Food Distribution Administration. Total demand was then computed by aggregating foreign and domestic requests along with estimates of the minimum working reserves and contingency stockpiles deemed necessary to service an annual program for each commodity. Comparable supply totals were derived by securing inventory, production and import data from domestic production and foreign procurement agencies.

<sup>62</sup> These parallel activities were more closely integrated with the formation of the Foreign Economic Administration on September 25, 1943 through the merging of the Board of Economic Warfare, the Office of Lend-Lease Administration, the Office of Foreign Relief and Rehabilitation Operations and certain other agencies. (*Executive Order 9380.*)

Once the locus and scale of imbalances were revealed, the process of adjustment was initiated. Domestic commodity committees reviewed the possibilities of reducing deficits by modifications in production and by the substitution of nutritionally similar foods for those which were particularly scarce. The commodity committees of the Anglo-American Combined Food Board reviewed the world balance of supply and demand as a basis for suggesting possible adjustments. Beyond that point, negotiations dominated the proceedings.

Negotiations with production officials sought to increase the contributions anticipated from farms. Negotiations with claimants sought to alter and to reduce their initial requests. Negotiations at varying levels of the Combined Food Board sought to increase U. S. import quotas and to transfer some of the claims made on the U. S. to other sources of supply. Negotiations with shipping officials sought to increase the tonnage allocated for food transport and to modify the disposition of such freight capacity among alternative destinations. Moreover, success at any point in this highly inter-acting process immediately required revisions in the objectives and potentials being debated elsewhere.

Some of the features of this procedure which were most influential in defining final allocations can be examined without tracing in further detail the tangled web of multiple negotiations whence allocations proposals gradually emerged at progressively higher policy levels.<sup>63</sup>

First, for example, it might be noted that although the primary task of the allocations procedure was to determine how much less than was requested should be allotted to each claimant, few clearly enunciated principles were discernible which could have been expected to guide such decisions in accordance with some predetermined food strategy. Should the estimated net shortages have been prorated equally among all claimants by means of a uniform percentage reduction of all requests or should such decreases have been deliberately preferential? A review of actual decisions demonstrates that the latter course was adopted but offers no clues as to how the preferential order was arrived at. Perhaps the most apparent and most justifiable assumption that seems implicit in the past record of allocations is that our armed forces were to be granted virtually everything that they requested. Beyond that point, however, guiding principles became so elusive as to seem non-existent. Were foreign military

<sup>63</sup> For a detailed outline, see "Procedures for the Allocation of U. S. Food Supplies", Memorandum No. 1068, issued by Secretary of Agriculture Claude Wickard on January 26, 1943, and presented as an exhibit by Roy F. Hendrickson in *Senate Hearings on War Mobilization*, Part 2, galley, p. SO58.

claims to take precedence over domestic civilian claims? Were allocations among foreign claimants to be adjusted inversely to their relative consumption levels? On what basis was the decision to be made to reduce or not to reduce U. S. civilian consumption? What criteria were to be employed to determine when the burdens of further adjustment should be borne by producers rather than by consumers?

In the absence of authoritative directives designed to implement larger war plans, it is not surprising that negotiations dominated by officials charged with domestic responsibilities and by selective foreign participation tended to eventuate in compromises weighted in favor of maintaining current patterns of production, current patterns of domestic consumption, and current patterns of dividing exportable supplies among foreign claimants.

Second, while international negotiations are properly undertaken only on the basis of views formed independently by each of the governments involved, the organization and operations of the Combined Food Board<sup>64</sup> reportedly placed the British in the embarrassing position of seeming to participate in the formation of internal American policies affecting the United States, as well as those affecting the United Kingdom and other nations. Several circumstances lent credence to such not uncommon assertions.

One of the most frequently mentioned of the Board's seeming trespasses was the adoption as its own working staff of the Office of Foreign Agricultural Relations of the Department of Agriculture—the one agency in the U. S. Government conversant enough with foreign agricultural developments to advise American officials on the most important policy problems and negotiations in this field. It was the sober judgment of a number of food officials that by servicing the Board, the OFAR seriously undermined its usefulness in confidential United States undertakings and deprived our government of a major center of needed technical competence. Other queries along these subtle political lines concerned the close involvement of the Board in every stage of the allocations proceedings. Protests were voiced repeatedly regarding the Board's extensive duplication of U. S. allocations operations; regarding its direct participation in discussions throughout the negotiations process, without first awaiting the crystallization of American views; and regarding its practice of

<sup>64</sup> The Combined Food Board was established on June 3, 1942 as an Anglo-American agency to formulate mutually acceptable policies relating to the production, procurement and distribution of food and other agricultural goods. (Joint public statement by President Roosevelt and Prime Minister Churchill, *New York Times*, June 4, 1942.)

aggressively pressing whichever of its recommendations had not been satisfied through negotiations at one level of authority on up to successively higher levels. Most unfortunate of all was the belief of some government officials that these procedures actually resulted in unduly expanding allocations for British account.

It should perhaps be mentioned as an administrative footnote, and even as a possible contributory cause of the foregoing exaggerations of British accomplishments, that all American officials commented admiringly on the way in which the compact size, the clearly developed views and the strict discipline of British delegations to this country heightened their effectiveness when confronted by numerous U. S. representatives, loosely organized, subject to little discipline, and with each acting in accordance with his own conception of what the unclarified elements of American policies should have been.

A third significant feature of our food allocations procedure, and one that had a bearing on intervening relations with the British, was the intermingling of the problem of how much of its supplies the United States should contribute to meet United Nations' needs with the problem of how such export supplies should be apportioned among competing claimants. The former involved a sovereign decision about the disposition of national resources. It should not have been made without reference to the urgency of foreign needs and the scale of supplementary resources; nor should such decisions have barred possible modifications suggested by subsequent negotiations with other nations. But the then-current climate of political opinion did seem to counsel the exclusion of foreign participation from the body of such U. S. deliberations.

No such sovereign jurisdiction was necessarily attached, however, to the allocation of United Nations' export supplies among deficit areas. These stocks were a major war resource of the United Nations; and they should have been distributed in accordance with the coalition's guiding military strategy, and by those nations who formulated it. There was no proper questioning of the rightfulness of British participation in such determinations. But it was appropriate to suggest the desirability of broadening United Nations participation in such critical, strategic decisions.<sup>65</sup> The limitation of Combined Food Board membership to the United States and to the British was often justified on the grounds that these two contributed most heavily to United Nations export supplies, and hence as donors should exercise their preferences in the disposition of their beneficences. Inadequate as this principle may have been in cement-

<sup>65</sup> *House Hearings on Extension of Lend-Lease Act, 1943*, pp. 37, 233.

ing inter-allied relations, its defense was rendered less tenable still by the circumstance that the United Kingdom was itself also the major consumer of such supplies. Emphasis on their role as producers thus placed the British in the unfortunately vulnerable position of passing judgment on the claims of other United Nations competitive with their own in seeking a share of American exports<sup>66</sup> and of other exports as well.

In short, possible foreign intervention in U. S. policy formation and insupportably close U. S. control over truly international decisions were both rooted in a faulty differentiation of responsibilities between the War Food Administration and the Combined Food Board. It is also worthy of note that the broad scope of Combined Food Board allocations might well have counseled a fuller representation of the most important nations affected thereby.

#### 4. JOINT MOBILIZATION OF UNITED NATIONS RESOURCES

Further food mobilization potentials beyond those already harnessed could have been attained through the expansion and conversion of output in major producing areas, through the selective reduction of civilian consumption at points where health needs would not be endangered, and through the intensification of production in hitherto under-developed regions. Each of these measures would have involved risks and hardships for the nations that employed them. Because those who lagged behind might thereby have secured competitive economic and political advantages, progress toward these goals could not but be halting until all nations agreed to shoulder the burdens equitably.<sup>67</sup> Moreover, only by closely associating their efforts could the United Nations have garnered the enhanced yields of specialization, minimized wasteful duplications, eliminated wholly unattended gaps in necessary categories of production, and reduced the resultant demands on shipping facilities.

Joint mobilization of the resources accessible to the United Nations would have involved two tasks: first, the adoption of uniform objectives and standards of contribution<sup>68</sup> to guide the nations constituting its mem-

<sup>66</sup> Testimony of Roy F. Hendrickson in *Senate Hearings on War Mobilization*, Part 2, galley, p. KH8.

<sup>67</sup> For example, it was stated by Dr. Edwin A. Gaumnitz, Assistant to the Executive Director, Board of Economic Warfare, that if the U. S. had been willing to reduce its fats and oils consumption in order to increase allocations to foreign claimants, the British, too, would probably have been willing to turn some of their fats and oils over to European relief. (Personal interview, June 1943.)

<sup>68</sup> To what extent should pre-war patterns of crop specialization have been altered? Should adjustments in consumption have been guided by the pursuit of equality among

bership in their formulation of internal policies relating to production, consumption, foreign development and allocations for export; and, second, the establishment of representative, authoritative international machinery to distribute the resources contributed by each nation for foreign use, whether in the form of funds, productive equipment, food supplies, cargo space, or warehousing facilities.

A variety of agencies were already functioning usefully in knitting together the food policies of the United Nations. A committee in London sought to cope with problems of this order affecting the British Empire. Canada and the United States formed a joint committee to bring their production and consumption policies into closer harmony.<sup>69</sup> Although its membership was confined to the United States and the United Kingdom, until Canada was included late in 1943, the Combined Food Board still represented the greatest advance yet achieved toward filling the organizational void which existed at the point where all interacting food problems and plans of the United Nations should have been fitted together in accordance with war urgencies. But so long as the Board had but two or three membership spokes connecting it with the full circle of United Nations requirements, resources and policies, it could not effectively serve as the hub of the United Nations food mobilization drive.<sup>70</sup>

It was the conclusion of the head of the Food Distribution Administration, Roy F. Hendrickson, in July 1943, that:

...at present we lack an effective international organization through which to develop uniform food policies in all United Nations. ... If we are to have a truly integrated United Nations food policy, each nation must be made to feel that it is a party to the agreement and some generally accepted method of inducing adoption of comparable measures in different countries found. ... Despite many difficulties it will be necessary to set up an international or-

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all nations, by the re-establishment of pre-war differentials or by the provision of at least the minimum levels necessary to maintain health in all friendly countries? Should Canadian butter consumption and meat consumption in Australia and New Zealand have been reduced to U. S. levels? Should U. S. meat consumption have been reduced to U.K. levels? What sacrifices should have been assumed by exporting nations to raise liberated areas consumption to levels scientifically deemed necessary to maintain physical vigor? Throughout the war no guiding principles were enunciated to effect unity in objectives and uniformity in performance in relation to these issues among the United Nations.

69 U. S. Department of Agriculture news release, January 7, 1943.

70 It is well known that Canada had shown uneasiness about being denied membership on the Board initially. Concern was also expressed repeatedly during the fall of 1942 about the failure of the Combined Board to achieve effective collaboration with the Soviet Union. (Personal interview with Roy F. Hendrickson, June 1943.)

ganization to deal with these problems. . . . Agreements should be sought in the fields of food requirements, production, limitation of civilian consumption and in prices and financing of food purchases and sales. . . . Undoubtedly much more rapid progress could be made in utilizing all of the world's resources in the war food production effort if improvements were made in our international organization.<sup>71</sup>

The prospects for the establishment of a United Nations food mobilization agency seemed to grow progressively more bright during the early spring of 1943. The press carried stories of active government consideration of such a possibility.<sup>72</sup> Preparations for the United Nations Conference on Food and Agriculture spurred such expectations. When the Conference was finally held,<sup>73</sup> however, its work was sharply restricted so as to exclude not only the problems of wartime mobilization but also the problems of post-liberation relief.<sup>74</sup>

The organization of UNRRA provided still another opportunity for broadening participation in the control of United Nations' food resources and for more fully integrating the domestic food mobilization policies of the participating nations. Unfortunately, however, this agency of 44 nations was required to submit to the allocations decisions of the Anglo-American-Canadian Combined Food Board, instead of to a more broadly representative international allocations agency. Moreover, UNRRA's scope of activities was so narrowly circumscribed as to render it primarily an agency for the distribution of whatever inadequate supplies were made available to it,<sup>75</sup> rather than an organization which would utilize its far-reaching membership to initiate parallel measures for expanding needed production and reducing inessential consumption.

Later, the Allies continued to mark further progress toward a closer co-ordination of their general war plans. But not even the alarmingly steady growth in worldwide food deficits resulted in the establishment during the war of organizational machinery capable of coping with them.

71 *Senate Hearings on War Mobilization*, Part 2, galley, pp. KH8-9.

72 See, for example, the story headlined "Roosevelt May Offer Wickard Allied Food Production Post," *Washington Post*, March 29, 1943. Also see *Washington Evening Star*, July 14, 1943.

73 Held in Hot Springs, Va., from May 18 to June 3, 1943.

74 Address by Marvin Jones, President of the Conference, House Committee on Agriculture, *United Nations Conference on Food and Agriculture*, U. S. Government Printing Office, June 22, 1943, p. 11.

75 See the detailed comparison of UNRRA needs, Combined Food Board allocations and UNRRA shipments for the first two quarters of 1946 in the *Report of the Director General to the UNRRA Council*, United Nations Relief and Rehabilitation Administration, Council IV Document 245, May 6, 1946, pp. 10-11.



## CHAPTER XI

### DOMESTIC CIVILIAN CONSUMPTION

THE core of an effective program of agricultural mobilization must be the determination and public announcement of the relative essentiality of all crop and livestock products. Without the establishment of such standards, there can be no sound guidance of conversion efforts and no basis for measuring their progress. Lacking such criteria, no consistent priorities system can be developed for channeling the redistribution of farm labor, or for controlling the allocation among alternative uses of available farm machinery, fertilizers, transportation facilities and other resources. Even the reorganization of the agricultural price structure and the design of an implementing system of war production incentives necessarily depend for sound footing on the prior definition of relative urgencies.

Obviously, no realistic food supply program can be formulated except through the mutual adjustment of consumer needs and of practical production alternatives. As contrasted with the peacetime process of gearing these contending factors together, however, that which prevails in war-time should ensure not only that each is progressively adapted to the other but also that both are brought into conformity with the over-riding objectives of mobilization policy. Instead, throughout the greater part of the war, consumption patterns were molded primarily by whatever supplies came to markets; and inasmuch as but modest progress had been achieved in the conversion of agriculture, changes in consumption patterns, too, were largely peripheral.

#### I. FOOD CONSUMPTION PATTERNS

Despite the widespread sense of deprivation fostered by shortages in supply relative to demand as well as by rationing restrictions, American civilians actually enjoyed the greatest feast period in all our history during the war. Some modest reductions in average consumption levels were experienced during 1942 and 1943; but these appeared to be more serious at the time<sup>1</sup> than is borne out by factual comparison with pre-war standards, largely because they had been preceded by an extraordinary rise in average food consumption during 1939-41. Indeed, per capita civilian consumption actually rebounded to an all-time high in 1944, and to a still higher peak during the last year of hostilities.

<sup>1</sup> For example, see the Republican Congressional Food Study Committee's public report of a survey of 1,000 editors and publishers of trade, farm and other publications located in 47 states. "59.1 percent of those replying said their community was suffering from food shortages." (*New York Times*, July 22, 1943.)

*Average Consumption Levels*

The significance of wartime gains in average food consumption can be properly appraised only against the background of extremely limited advances recorded during the 30 years preceding the recent world war. Taking the average for 1935-39 as 100, the index of per capita food consumption in the U. S. devised by the Bureau of Agricultural Economics rose from 98 in 1909 to only 102 in 1929, and after declining to 96 during the following depression had returned to 100 by 1937 and 1938. Thus, an increase of 4 percent in 1939 raised the index to the highest level of the entire period covered by available data. Nevertheless, the further gain achieved during the next six years exceeded even the total advance effected between 1909 and 1939. Per capita civilian food consumption rose again in 1940 and still more rapidly in 1941, when it reached a level 4 percent above that of 1939. Hence, in spite of successive declines of one percent each during the next two years, the index for 1943 still surpassed the 1940 as well as the 1939 records. From this "trough," average civilian consumption turned sharply upward, the index reaching 111 in 1944 and 112 in 1945.<sup>2</sup>

Analysis of the composition of the wartime food supply reveals both that pre-war patterns were reasonably well-preserved, thus indicating that neither palatability nor variety was sacrificed unduly, and that the healthfulness of average diets was actually improved.

One general measure of variability in the composition of civilian food consumption is provided by a comparison of the proportion of the estimated retail weight of per capita supplies accounted for by the principal foodstuffs categories in 1935-39 and during the war years. For meats, fish, poultry and eggs, this figure was 12 percent prior to the war and averaged 12.6 percent during 1941-45. Dairy products including butter accounted for 26 percent of the earlier total and averaged 28.4 percent in the later period. Fats and oils excluding butter remained unchanged at 2 percent during both periods. Fruits, vegetables, potatoes, sweet potatoes, beans, peas and nuts contributed 38 percent of the total during 1935-39 and 36.2 percent during the 5 years ending in 1945. The final group, sugar and miscellaneous, accounted for 22 percent of the pre-war total and 20.8 percent of the per capita civilian food supply during the war

<sup>2</sup>In order to encompass not only increases in the volume of consumption but also shifts from less costly foods, such as potatoes and grain products, to the more costly types, such as meats and dairy products, this index was computed by using 1935-39 retail prices as constant weights in combining the various categories of foodstuffs entering into consumption. (*The National Food Situation*, November-December 1945, pp. 12-13. For the revised 1945 estimate of 112, see *The National Food Situation*, April 1946, p. 4.)

years. Thus, in these broad terms at least, no adjustments of major significance are discernible.<sup>3</sup>

Although a closer examination of the content of civilian food consumption during the war does reveal a number of specific adjustments of significant proportions, the results tend less to undermine than to reinforce the foregoing impression of comparative well-being. As regards the availability of meat, it should be noted first that meat consumption per capita was greater in 1939 than in any year since 1927, except for 1933 and 1934 when depression and drought combined to force an extraordinary liquidation of livestock herds.<sup>4</sup> This per capita figure rose by an additional 6 percent during 1940 and remained at the new peak during 1941 before beginning a two-year decline. Even in 1943, however, total annual meat consumption per capita surpassed the 1939 level by 3 percent and only fell short of the 1941 record by 5 pounds. Thus, the major impact on this area of consumption during the early years of the war was the enforced relative shift toward greater beef consumption during 1941 and 1942, and a reversal of this in favor of pork during 1943. Before leaving this period, it should also be observed that a progressive and heavy increase in the consumption of chickens and turkeys had by 1943 so much more than offset the reduction in meat consumption that total per capita consumption of meats, chickens and turkeys in that year was actually the highest in more than 15 years. Meat consumption rose sharply in 1944, when, for the only year during the war, pork consumption and the consumption of beef and veal both moved upward instead of running counter to one another. But the total declined almost as abruptly during 1945. Compared with the 1940 total of 162.6 pounds of dressed meats, chicken and turkey, Table 39 reveals that aggregate per capita consumption of these foods in 1944 and 1945 came to 175.4 and 167.3 pounds respectively.

American civilians also fared reasonably well during 1940-45 in respect to their consumption of dairy products, except for the substantial decline in available supplies of butter. The per capita consumption of fluid milk and cream rose to successively higher records. Condensed and evaporated milk consumption per capita declined after 1940, but from so high a peak that all peacetime records were exceeded in each war year with the

<sup>3</sup> See table entitled "Changing Content of the Civilian Per Capita Food Supply During the War," *The National Food Situation*, February-March 1946, p. 16.

<sup>4</sup> *Agricultural Statistics—1944*, p. 330. During 1934, the slaughtering of livestock acquired by the government alone under its relief purchase program added more than 1.5 billion pounds of meat to total consumption. (*Ibid.*, p. 329.)

TABLE 39

APPARENT U.S. CIVILIAN FOOD CONSUMPTION, PER CAPITA,<sup>1</sup> 1935-39 AVERAGE AND 1940-45  
Pounds

Food Categories	Average 1935-39	1940	1941	1942	1943	1944	1945
<b>Meats (dressed weight)</b>							
Beef and veal .....	62.8	62.0	68.1	69.2	57.5	64.7	70.3
Pork (excluding lard) .....	56.1	72.4	66.5	61.5	72.4	77.0	60.2
Lamb and mutton .....	6.7	6.6	6.8	7.2	6.4	6.7	7.2
Total .....	125.6	141.0	141.4	137.9	136.3	148.4	137.7
<b>Chickens &amp; turkeys (dressed wt.)</b> .	20.5	21.6	23.0	25.2	31.4	27.0	29.6
<b>Eggs</b> .....	37.3	39.5	38.9	38.9	43.1	44.0	49.0
<b>Dairy Products</b>							
Fluid milk and cream (whole milk equivalent) .....	340.	343.	351.	372.	403.	421.	438.
Condensed and evaporated milk	16.7	19.2	18.2	18.3	18.6	16.1	18.3
Cheese, American and other whole milk types .....	5.5	6.0	6.0	6.3	5.0	4.9	5.9
Total milk (whole milk equivalent) .....	801.	821.	807.	839.	761.	789.	799.
<b>Fats and Oils</b>							
Butter, farm and factory (actual weight) .....	16.7	16.9	15.9	15.6	11.7	11.9	10.9
Lard, margarine and other edible (fat content) .....	31.3	33.1	34.9	32.3	33.9	32.9	31.3
Total .....	48.0	50.0	50.8	47.9	45.6	44.8	42.2
<b>Fruits</b>							
Fresh .....	138.5	143.4	147.3	129.8	120.9	144.5	144.7
Canned fruits and juices .....	19.3	25.8	27.6	23.5	19.6	19.4	19.4
Dried and frozen .....	6.5	7.5	5.3	6.1	7.2	8.4	8.3
<b>Vegetables</b>							
Fresh .....	235.	239.	241.	251.	236.	255.	268.
Canned and frozen .....	31.5	35.8	39.3	39.7	38.5	36.3	46.3
Potatoes and sweet potatoes ....	153.5	148.5	144.6	137.3	154.6	148.7	149.0
Dry beans and peas .....	9.3	9.4	9.0	9.7	9.8	8.5	9.3
Canned soups .....	5.2	7.5	7.6	8.5	6.9	8.8	10.1
Peanuts (shelled) .....	4.4	4.9	4.8	6.4	6.3	6.2	6.6
Sugar (refined) .....	96.5	95.2	103.6	86.2	80.3	89.0	73.8
<b>Grains</b>							
Corn products .....	37.5	37.5	38.7	44.5	43.6	41.8	40.9
Wheat flour and cereal .....	156.8	151.2	155.9	159.5	166.4	165.9	167.9
Oatmeal, rye flour and barley food products .....	7.7	7.5	7.6	8.9	8.6	7.3	8.2
Rice, milled .....	5.6	6.3	6.2	5.9	5.8	5.0	4.7
<b>Beverages</b>							
Coffee (green bean basis) .....	14.0	15.5	15.6	13.4	13.0	15.8	16.7
Tea .....	67	7	8	53	46	53	59
Cocoa beans .....	4.4	4.9	4.8	3.8	2.9	3.6	4.0

<sup>1</sup> Population estimates used are official census estimates adjusted for under-enumeration of children under 5 and for military personnel eating out of civilian supplies.

Source: *The National Food Situation*, September 1946, pp. 6-7, and comparable revisions of data for 1940 by Division of Statistical and Historical Research, Bureau of Agricultural Economics, unpublished, Jan. 30, 1946.

single exception of 1944.<sup>5</sup> After rising to an all-time peak of 6.3 pounds per capita in 1942, the supply of cheese available to civilians each year had declined 1.4 pounds by 1944 before effecting a rapid recovery during the following year. Although per capita civilian consumption of ice cream, too, declined after 1942, the lowest level reached, 12.2 pounds in 1943, was still substantially greater than all pre-war records. Accordingly, the most significant loss suffered in this area of consumption was the sharp reduction in butter supplies during 1943-45. After averaging 15.8 pounds per capita during 1941-42, civilian consumption dropped to an average of only 11.5 pounds per annum during the following three years.

The average annual civilian consumption per capita of lard, margarine and all other edible fats and oils except butter was higher during 1940-45 than at any time in more than 25 years,<sup>6</sup> slight gains in 1941 and 1943 offsetting slight reductions in 1942, 1944 and 1945. Per capita egg consumption by civilians not only exceeded immediate pre-war levels during 1940-42 but rose rapidly to reach a level in 1945 some 24 percent above that prevailing in 1940. New record levels of consumption were also established in regard to fresh, canned and frozen vegetables, canned soups and peanuts. In the case of such basic, though less eagerly sought, commodities as potatoes, sweet potatoes, dry beans and peas, and grain products, per capita civilian consumption remained at relatively high levels in comparison with recent pre-war years. On the other hand, 1942 and 1943 saw sharp reductions in the consumption of sugar, coffee, tea, cocoa, fresh fruits and canned fruits and juices, and these were fully restored during the next 2 years only in the case of fresh fruits and coffee.

In short, while some categories of consumption were reduced more than others, these data patently offer no evidence of severe privations or even of serious curtailments in any except sugar and butter, and of these the latter was eased somewhat by the expanded consumption of margarine and other edible fats and oils.

The functional value of food as a source of energy and as a safeguard of vigorous health can be better indicated by its nutritional content than by its sheer weight. Appraised on this more significant basis, Table 40 reveals that the civilian food supply per capita during 1940-45 compares most favorably with that of recent pre-war years. Apparent civilian consumption per capita in 1940 was already nutritionally superior to the highest levels which had been attained, at least during the preceding 20 years for which such data have been estimated.<sup>7</sup> Nevertheless, further improvements were achieved during each of the succeeding five years.

<sup>5</sup> For per capita civilian consumption of canned milk, cheese, ice cream, butter and other dairy products, see *Agricultural Statistics—1946*, pp. 396-7.

<sup>6</sup> *Agricultural Statistics—1944*, p. 150.

TABLE 40  
NUTRIENTS AVAILABLE FOR CIVILIAN CONSUMPTION AND RECOMMENDED ALLOWANCES, 1935-39 AVERAGE AND 1940-45<sup>1</sup>  
Per Capita, Per Day

Nutrients	Unit	Recommended Allowances <sup>2</sup>	Average 1935-39	1940	1941	1942	1943	1944	1945
Food energy	Calories	2,700	3,250	3,360	3,440	3,380	3,390	3,460	3,350
Protein	Grams	65	83	94	93	96	98	100	101
Fat	Grams	....	131	142	143	138	141	144	138
Carbohydrate	Grams	....	429	426	443	434	430	439	426
Calcium	Grams	.93	.90	.93	.95	1.00	1.04	1.05	1.09
Iron	Milligrams	12	14	14	15	16	16.5	18.2	18.7
Vitamin A	International units	4,500	8,000	8,200	8,300	8,700	9,200	9,400	9,800
Thiamine	Milligrams	1.5	1.5	1.7	1.8	2.0	2.2	2.3	2.2
Riboflavin	Milligrams	2.2	1.8	1.9	2.0	2.1	2.2	2.5	2.5
Niacin	Milligrams	15	15	16	17	18	19	21	21
Ascorbic acid	Milligrams	71	115	120	120	125	126	135	141

<sup>1</sup> Data computed by Bureau of Human Nutrition and Home Economics. No deductions have been made for loss of nutrients due either to waste of food in the home or to cooking but deductions have been made for inedible refuse. Allowances have been made for vitamin gains resulting from enrichment of bread and flour.

<sup>2</sup> Dietary allowance recommended by National Research Council. These allowances are on an actual intake basis and hence do not allow for the waste of edible material. (*Recommended Dietary Allowances*, National Research Council, Reprint and Circular Series No. 115, January 1943, pp. 2-3.)

Source: Bureau of Human Nutrition and Home Economics, and *The National Food Situation*, September 1946, p. 9. Comparably revised data for 1940 and 1941 supplied by same source, February 1946.

In caloric value, the civilian food supply during 1940-45 remained relatively stable at a level which had been equalled since the first World War only during 1926-28. The apparent per capita consumption of proteins and fats was the heaviest since 1920, as was also true of calcium, iron, vitamin A, thiamine, riboflavin, niacin and ascorbic acid. Only in the case of carbohydrates had earlier consumption levels been higher. Moreover, although average civilian consumption reached its lowest level of the war in 1943, the per capita consumption of these major nutrients was higher in that year than in 1940 in every case except fats. During 1944 and 1945, still further significant gains were achieved in respect to proteins, calcium, iron, vitamin A, riboflavin, niacin and ascorbic acid.

There remains, nevertheless, the question of how adequate these impressive quantities of food and nutrients were relative to the needs of maintaining a healthy population.

If the adequacy of available food supplies could be evaluated only in terms of comparisons with the patterns of preceding years, food mobilization policies would necessarily have been committed to an indiscriminating reinforcement of past consumption habits. Fortunately, however, recent advances in the science of nutrition had provided the basis for a more dynamic and functionally efficient formulation of food management objectives by producing reliable estimates of physiological requirements for various nutrients.

Using the following average daily allowances of nutrients recommended by the Food and Nutrition Board of the National Research Council, the most widely accepted determinations available on bodily food needs,<sup>8</sup> it is reassuring to observe in Table 40 that the nutrient content of the civilian food supply was equal to or above the recommended allowance for each item except calcium and riboflavin as far back as 1935-39. As a result of steady gains during the war, the riboflavin and calcium deficiencies had been overcome by 1943 and the other allowances were being surpassed by 25-75 percent.<sup>9</sup> Indeed, these margins above need were

8 Dr. Russell M. Wilder, Chief of the Civilian Requirements Branch, Food Distribution Administration, testified that, "The Board arrived at its allowances in 1941 after consultation with the foremost authorities in the nutrition field." Since then its "yardstick has been widely approved and accepted. It is the measure used by all agencies of the Government concerned with nutrition, and it has been recognized by the United Nations Conference on Food and Agriculture (Hot Springs, Va., 1943). Canadian and British standards are essentially the same." (*Senate Hearings on War Mobilization*, Part 2, galley, p. SO22.)

9 That such information was not yet a matter of common knowledge is evident from the fact that Chairman Robert R. Reynolds of the Senate Military Affairs Committee felt called upon to warn that, "the home folks have been so neglected that the possibility of a balanced diet for them in the future is rapidly disappearing." (*Washington Times-Herald*, February 18, 1943.)

found to be even greater than hitherto indicated by later National Research Council findings which led in 1945 to a reduction of about 10 percent in the national equivalent of the recommended allowances for thiamine and niacin and of about 20 percent for riboflavin.<sup>10</sup>

Inasmuch as National Research Council standards are on an actual intake basis, the above civilian supply data must be corrected for the wastage of edible foodstuffs by consumers and for the loss of nutrients in cooking. Such estimated adjustments reduce the foregoing levels for calories, proteins, fats, carbohydrates and calcium by 6-8 percent, for vitamin A and riboflavin by 10 percent, and for iron, thiamine, niacin and ascorbic acid by 20-30 percent.<sup>11</sup> Even with these losses, which are in large degree avoidable, the apparent intake of nutrients per capita was in excess of all current National Research Council allowances.

It is amply evident from the foregoing data that pre-war levels of food consumption were surpassed throughout the war. The importance, and indeed the very desirability, of this achievement during the period of mobilization depends on the extent to which such gains were essential to the maintenance of health and vigor of the civilian community. Increases in the availability of certain minerals and vitamins were certainly justified by the deficiency of average consumption in these categories relative to the allowances recommended by the National Research Council. However, these advances represented but a very small part of the total expansion in consumption—and most of the remainder could not readily be justified by emergency standards of need and value.

That the nutritional quality of average consumption advanced more steadily and further than the sheer quantum of food intake represented creditable progress, of course. It would be erroneous, however, to regard this improvement as more than a peripheral feature of a broad increase in food consumption, or, except for the bread enrichment program, to attribute nutritional advances primarily to mobilization policies rather than to the overwhelmingly greater influence of expanded incomes, which permitted fuller gratification of consumer desires for such relatively more expensive foods as milk, green vegetables and fresh fruits as well as for others which are less essential nutritionally. Indeed, substantially greater gains in the food value of agricultural output could have been achieved

10 Based on application of National Research Council findings to the age and sex composition of the national population by the Bureau of Human Nutrition and Home Economics. (Information supplied by this agency to author, February 1946.)

11 Based on data presented by Lt. Col. Ralph W. Olmstead, Director of Supply, War Food Administration in *House Hearings on Agriculture Department Appropriation Bill, 1946*, p. 83.



if food mobilization officials had directed a larger proportion of available farm resources into the production of those crops and livestock products which yield the greatest output of nutrients per unit of production costs, and especially into the production of those crops which yield the nutrients that were in shortest supply relative to foreign as well as domestic requirements. It should be recognized, however, that such policies would have required a fundamental re-orientation of the food mobilization program, entailing substantial adjustments in consumption as well as production patterns, and might, therefore, have generated far more vigorous opposition than was aroused by the comparatively minor deviations from familiar patterns sought by established policies.

### *Differential Food Requirements and Consumption*

To achieve a fully realistic understanding of civilian consumption problems, it is also necessary to probe beneath the foregoing average relationships between consumption and nutritional requirements. Individual consumption levels obviously cover a wide range both above and below the national average. Such variations stem partly from differences in physiological needs, partly from inequalities in purchasing power and partly from the uneven distribution of marketing facilities and available food supplies. At any rate, it must be recognized that only by bringing the actual consumption levels of major population groups into progressively closer alignment with their particular physical needs was it possible to maximize the curtailment of the wastes caused both by excessive and by inadequate consumption, and thus further the achievements of wartime food management.

The fact that individual food needs vary substantially by occupation, age, sex and physical condition was of major significance for the proper wartime allocation of available civilian supplies. In order to maintain full working efficiency, men engaged in heavy manual work, whose numbers were multiplied by war tasks, need 50 percent more calories and substantially larger quantities of B vitamins than even moderately active men. While women in general have lower food requirements than men, it is important to recognize that 13 million were doing heavy manual work during the war, necessitating a proportionately greater intake of calories and B vitamins than in the case of women less energetically occupied. Children's needs differ markedly with age, calling for fewer calories but more calcium in younger years and actually requiring more of all nutrients during adolescence than moderately active adults of the same sex.<sup>12</sup>

<sup>12</sup> *Recommended Dietary Allowances*, National Research Council, pp. 2, 3.

In addition, millions of pregnant women and sick people have highly distinctive food needs, whose supply is necessary to their health.<sup>13</sup> If these differentials were relatively slight, or if only some small proportion of the population were affected by them, they would not have posed significant problems in the effective distribution of available food supplies. Because such differentials actually are very large and because they affected a sizeable sector of our citizenry, they could be neglected under a system of rationing only at the risk of submerging need as a primary determinant in food sharing.<sup>14</sup>

Field research has amply demonstrated that variations in the adequacy of food consumption patterns are more closely related to differences in purchasing power, to the accessibility of supplies and to food habits than to the differentials in biological requirements just noted. Of these several factors, purchasing power looms as apparently by far the most influential. A wide variety of regional studies of nutrition and of individual case histories presented in the special issue of the *Annals* devoted to war and post-war food problems<sup>15</sup> all support the conclusion expressed by one of the contributors that, "In the north as elsewhere, inadequate income with insufficient money spent for food is more responsible for dietary inadequacies than any other one factor."<sup>16</sup> The Federal Government's comprehensive *Consumers' Purchases Study* of 1935-36 added further documentation to this thesis by showing that differences in the nutritional adequacy of consumption among racial, regional and occupational groups seem to grow insignificant when comparisons are restricted to families possessing equivalent purchasing power.<sup>17</sup> Scanning still broader horizons, the United Nations' Conference on Food and Agriculture agreed that, "The first cause of hunger and malnutrition is poverty."<sup>18</sup>

Not only do limited funds restrict the sheer volume of food consumed, but the nutritional content of resulting diets is further minimized by

13 The initiation of administrative efforts to cope with such problems was publicly announced by Dr. Russell M. Wilder in an address to the Massachusetts Medical Society, May 26, 1943, pp. 6-7, unnumbered mimeographed release by Food Distribution Administration.

14 Some further discussion of differential food requirements and rationing is presented in Chapter XII.

15 *Annals*, Vol. 225, pp. 43-65.

16 G. Dorothy Williams, "North and Northeast," *ibid.*, p. 46.

17 Testimony of Dr. Russell M. Wilder, *Senate Hearings on War Mobilization*, Part 2, galley, p. SO26.

18 United Nations' Conference on Food and Agriculture, *Final Act and Section Reports*, U. S. Government Printing Office, 1943, p. 11.

virtue of the fact that, "foods which are rich in minerals, vitamins and better quality proteins are generally more expensive."<sup>19</sup> The resultant gains in food consumption levels are quite substantial even with modest increments in income, as shown in Table 41. Thus, a comparison of the

TABLE 41  
FOOD PURCHASE PATTERNS OF URBAN FAMILIES, BY INCOME GROUPS, SPRING 1942

Selected Food Groups	Average Weekly Purchases Per Family				
	Annual Rate of Income				
	Under \$1000	\$1000- 2000	\$2000- 3000	\$3000- 4000	\$4000 and over
Meat, poultry and fish (lb.) .....	4.69	7.44	10.36	11.91	14.05
Fluid milk (qt.) .....	3.56	6.54	9.19	9.80	10.01
Butter and cheese (lb.) .....	.79	1.55	1.88	2.37	2.75
Eggs (doz.) .....	.80	1.39	1.62	1.71	1.89
Fats and oils, excluding butter (lb.) ....	1.24	1.37	1.61	1.49	1.63
Sugar and other sweets (lb.) .....	1.74	2.69	3.10	2.99	3.51
Cereals and bakery products (lb.) .....	8.00	9.92	12.58	13.11	14.70
Potatoes (lb.) .....	6.25	6.88	8.81	8.70	11.17
Fresh and frozen vegetables other than potatoes (lb.) .....	4.84	7.25	10.46	11.03	14.14
Fresh and frozen fruits (lb.) .....	4.76	8.82	13.28	16.58	17.74
Canned vegetables, including for infants (No. 2 can) .....	1.89	2.44	4.38	3.70	3.73
Canned fruits, including for infants (No. 2½ can) .....	.29	.51	.75	1.03	1.16
Average number of family members living at home .....	2.28	3.03	3.30	3.59	4.20
Average number of meal-equivalent per- sons <sup>1</sup> .....	2.20	2.98	3.27	3.51	4.05

<sup>1</sup> Computed by subtracting meals eaten away from home by family members and adding meals served in the home to guests, boarders and servants.

Source: Lenore A. Epstein, *Wartime Food Purchases*, Bureau of Labor Statistics Bulletin 838, U.S. Government Printing Office, 1945, pp. 6-12, 24.

average weekly food purchases of urban families receiving annual incomes of \$2000-\$3000 with those of families receiving less than \$1000 a year, based on a careful field sampling survey conducted by the Departments of Labor and Agriculture during the spring of 1942, reveals that the former group purchased at least 50 percent more per capita of the following food categories: meat, poultry and fish; fluid milk; butter and cheese; fresh and processed vegetables other than potatoes; and fresh and processed fruits. The higher income group also purchased at least one-fourth more eggs and sweets per capita. These heavy dietary advantages were hardly offset by the fact that the poorer group consumed slightly more per capita of potatoes, dry beans and peas, and fats and oils excluding butter.

National food consumption patterns have been so warped by income differentials that nutritional deficits have long been prevalent among a

<sup>19</sup> Testimony of Dr. Wilder, *Senate Hearings on War Mobilization*, Part 2, galley, p. SO26.

large sector of the American population, even during the years when food surpluses were regarded as a dangerous threat. Summarizing the results of a variety of food consumption surveys conducted since 1933, a committee of medical authorities observed not long ago that:

Every survey in the past decade has revealed widespread dietary deficiencies in the United States.... The evidence is consistent and overwhelming... very many persons are not receiving a sufficient supply of dietary essentials"... [As a result, nutritional] deficiency states are rife throughout the nation... Predominantly they are sub-acute or chronic states.<sup>20</sup>

In 1935-36, according to an estimate by the Bureau of Home Economics, less than 30 percent of the families in this country had diets that could be rated as nutritionally safe by National Research Council standards.<sup>21</sup> With the pattern of distribution of the civilian food supply during the early years of the war similar in many respects to that which prevailed in 1935-36, it is probable that a very substantial proportion of those whose diets were inadequate then were still experiencing such deprivations.<sup>22</sup> Even the tendency of lower incomes to rise during the war could not affect proportionate improvements in the consumption of most families involved because the food adjustments which are normally stimulated by increased earnings and which tend to better diets were restricted either by shortages of supply or by the sharp advance in food prices.

The salient features of the civilian consumption problem may thus be summarized briefly as follows:

1. Health and working efficiency cannot but suffer in the absence of adequate nutrition;
2. The average per capita civilian food supply was large enough to provide a very considerable margin of safety over minimum requirements in respect to all nutrients;

<sup>20</sup> Draft report by the Committee on Diagnosis and Pathology of Nutritional Deficiencies, *The Prevalence of Inadequate Diets and Deficiency States in the United States together with a Consideration of Their Significance*, National Research Council, mimeographed, 1943, pp. 1, 14, 32, 33.

<sup>21</sup> Bureau of Home Economics, *Are We Well Fed?*, Miscellaneous Publication 430, 1941, p. 7.

<sup>22</sup> See Table 41. Also see Draft Report by the Committee on Diagnosis and Pathology of Nutritional Deficiencies, *supra*, pp. 8-14, reporting similar findings of nutritional deficiencies in surveys conducted during 1940-43. It was also commonly noted by field agents of the Department of Agriculture that many low income families both in urban and rural areas could not afford to buy all the foods allowed by their ration points.

3. Yet, so warped was the distribution of that supply that at least half and perhaps two-thirds of the families in the U. S. were probably still lacking a thoroughly adequate diet despite the unprecedented need to maximize the mobilization and productivity of our manpower.

Here then, as was noted in regard to agricultural production resources, the immediate problem was attributable less to a net shortage of supplies than to a carry-over of peacetime patterns of maldistribution.

The British had already demonstrated that the assurance of healthful nutrition to all families, almost without regard to their financial means, was an important mobilization measure. They had demonstrated also that the nutritional adequacy of diets could be substantially improved even in the face of reduced total food supplies.<sup>23</sup> Our own management of civilian food supplies was seriously handicapped by the absence of as forthright an emphasis on the positive goal of reducing malnutrition. Our attention in such matters was concentrated unduly on the negatively oriented issue of whether to decrease civilian supplies further or to resist additional reductions. It is notable, also, that the form of our wartime distribution and consumption measures betrayed a monopolizing concern with total civilian supplies and with average consumption levels, thereby diverting efforts from the more fruitful potentials of improving the nutrition of those large groups whose diets were still insufficient to maintain vigorous health.

The need for more effective measures to modify the pattern of food consumption about the national average was clearly enunciated in mid-1943 by the Director of the Food Distribution Administration, Mr. Roy F. Hendrickson. In his statement to the Senate Subcommittee on War Mobilization, he said that, "without control of distribution and consumption, increased production will not make more food available to those needing it most."<sup>24</sup> Rationing and price control helped to prevent any extreme absorption of available supplies by the economically advantaged. But the only efforts made to actually augment the consumption of those subsisting on inadequate diets were some sporadic and invariably unsuccessful attempts to legislate the re-establishment of the food stamp plan program.<sup>25</sup>

<sup>23</sup> Radio address by Secretary of Agriculture Claude R. Wickard, Department of Agriculture news release, December 27, 1942, p. 5. Also see Chapter II.

<sup>24</sup> *Senate Hearings on War Mobilization*, Part 2, galley, p. KH3.

<sup>25</sup> Senator George D. Aiken of Vermont and Representative Christian A. Herter of Massachusetts were leaders in promoting the return of the food stamp plan—although primarily as an alternative to other food price control measures rather than as a supplementary measure to extend special aid to groups unable to purchase enough food to ensure the maintenance of vigorous health. (See *New York Times*, June 17, 1943 and *Congressional Record*, Appendix, November 29, 1943.)

## 2. THE ADJUSTMENT OF CIVILIAN SUPPLIES TO WAR NEEDS

The volume of foodstuffs which the United States could send to its allies and to liberated areas was limited by the margin between the supplies which remained after military needs and minimum civilian requirements had been met. However unstinted our zeal for expanding such contributions to the utmost, it clearly would not have served the interests of the United Nations' war effort to restrict the consumption of American civilians below healthful levels. Nevertheless, much could have been done to reduce the civilian drain on available food resources, both by improving the effectiveness with which civilian allocations were utilized and by maximizing the nutritional yield of such resources as were employed to meet civilian needs.

More thorough utilization of civilian supplies could have been achieved through the curtailment of distribution wastes<sup>26</sup> and through the already-discussed realignment of rations so as to conform more closely to the actual physical needs of major population groups. The two most promising means of increasing the volume of essential nutrients available for domestic consumption, without simultaneously augmenting demands on productive resources, were probably: to extend the fortification of common foods with needed minerals and vitamins; and to so modify the array of foods entering into civilian consumption as to provide for heavier reliance on those crops and animal products which most efficiently convert farm resources into essential nutrients.

### *Food Fortification*

Much of the resistance to proposed changes in customary civilian diets implied an unquestioning faith in the soundness of past patterns which is not borne out by medical research. In one series of experiments, volunteers who were fed for several months in accordance with the hypothetical average American diet of 1939, including the proportionate quantities of meat, butter, and fresh vegetables as well as processed fruits and vegetables, "developed serious disabilities." Further study revealed that only by introducing larger quantities of vitamins and minerals into this diet could such disorders be prevented.<sup>27</sup>

Food fortification was worthy of an important role in national food management because it offered an expeditious and unobtrusive means of combatting nutritional deficiencies caused either by the improper selection

<sup>26</sup> For a discussion of these problems, see the following chapter.

<sup>27</sup> R. M. Wilder, "Quality of the Food Supply and the Need for its Control", *The Scientific Monthly*, April 1943, p. 299.

of foods or by the removal of vitamins and minerals in the course of commercial food processing. Grain products constituted the outstanding example of the latter problem, for this category accounted for almost one-third of the total caloric intake of consumers during 1943-44,<sup>28</sup> and an even larger proportion among the lower income groups. Yet, the traditional milling of white flour from wheat, the major form of grain consumption, eliminated 86-90 percent of the thiamine and 60-80 percent of the niacin as well as other vitamins and minerals contained in the whole grain.<sup>29</sup> For this reason, the issuance of Food Distribution Order No. 1, by the War Food Administration,<sup>30</sup> requiring the enrichment of white bread with B vitamins and iron, probably marked the most notable single advance in food fortification achieved in the U. S.<sup>31</sup> Nor did this action exhaust the potentialities of improving diets by fortifying grain products. Substantial additional benefits would have accrued, especially to financially disadvantaged families, if the government had also pressed for the immediate enrichment of all other breads, biscuits, crackers, flour, macaroni products, corn grits, degerminated corn meal and polished rice.

Some progress was also achieved in the fortification of other foods, but the absence of effective government persuasion resulted in a wide range of variability. It is estimated that 90-95 percent of the margarine made for table use was fortified with vitamin A by 1943, thereby further reducing the nutritional cost of butter shortages. Although the practice of fortifying table salt with iodine was introduced approximately 20 years earlier, and although impressive achievements are credited to this innovation in combatting endemic goiter, two-thirds of the salt consumed by civilians during the early years of the war continued to lack such enrichment. The addition of vitamin D to milk illustrated an even less successful undertaking. Larger quantities of vitamin D are needed most by infants and growing children. Enough of this vitamin was available to fortify all fluid milk, but only an estimated 7 percent of the milk consumed in homes was so enriched during 1943.<sup>32, 33</sup>

28 U. S. Bureau of Human Nutrition and Home Economics, *Consumption Level Enquiry*, Table IV, June 22, 1943.

29 Wilder, "Quality of the Food Supply and the Need for its Control", *op. cit.*, p. 299.

30 Issued by Claude R. Wickard, December 29, 1942, to be effective January 19, 1943.

31 The sharp improvement in the thiamine supply during 1942 and 1943 "can be traced to the flour and bread enrichment program." (*The National Food Situation*, July 1943, pp. 9-10.)

32 *Senate Hearings on War Mobilization*, Part 2, galley, p. SO27.

33 A somewhat different problem of food fortification is posed by the finding that, "The dog food manufactured by American packers, containing much of what they

*Modification of the Content of Civilian Consumption*

While the primary purpose of food fortification was to alleviate the nutritional deficiencies attending current consumption patterns, the dominant objective of those seeking to "convert" civilian diets was to free more productive resources either for meeting foreign food requirements or for easing shortages elsewhere in domestic war industries. Estimates of the potential gains to be achieved as a result of dietary shifts varied with the scope of the revisions proposed: expressed in terms of millions of people whom U. S. production could feed at 1935-39 consumption levels, they ranged from 185 to 250 millions as compared with the approximately 145 millions actually supplied during 1941 and 1942.<sup>34</sup> In fact, it has been suggested that still more enormous gains might have been secured, for appropriate changes in U. S. consumption might well have encouraged parallel shifts in other friendly producing areas and thereby have further swelled the volume of foodstuffs available for deficit areas.<sup>35</sup>

Realizing the importance of stimulating thought and planning in relation to these emergent problems, the Senate Subcommittee on War Mobilization in mid-1943 requested and later secured some authoritative, albeit preliminary, estimates of how far consumption patterns might be modified. The resultant data did not offer a blueprint for immediate action. But they did purport to define ultimate strategic defenses, marking out the avenues along which cutbacks could most effectively be undertaken if

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designate as offals, is demonstrably superior in nutritive value to most of the meat they can for human food." (R. M. Wilder and T. E. Keys, "Unusual Foods of High Nutritive Value", *Journal of the American Medical Association*, October 17, 1942, p. 531.)

34 "During 1941 and 1942 we apparently produced enough food to supply about 145 million people with an average diet and the estimates which Mr. Tolley supplied to your committee indicate that we might expect to feed 40 million more than this two-year average with all-out production and some shifts in diets, or say a total of 185 million people at a per capita level equal to that prevailing in 1935-39." (Letter to Senate Subcommittee on War Mobilization from Oris V. Wells, Chief Program Analyst, Bureau of Agricultural Economics, August 13, 1943.)

"I had a discussion on that point with some rather eminent people in my office not long ago and one of them, in whom I have a good deal of confidence, hazarded the guess that we could, if we turned far enough towards direct consumption products, with our present land, labor and capital, produce a diet for 200 million people". (H. R. Tolley in *Senate Hearings on War Mobilization*, Part 2, galley, p. SO7.)

"Food economists have estimated that if this country goes all the way and feeds almost no grain to stock, it might be possible to feed approximately 250,000,000 people, probably less than the number we may be called upon to feed or help feed as the war progresses and ends." (C. Chester Du Mond, N. Y. State Commissioner of Agriculture, quoted in the *New York Times*, August 21, 1943.)

35 Roy F. Hendrickson, *Senate Hearings on War Mobilization*, Part 2, galley, pp. KH7, 9.



mounting demands on our food supply were not fully matched by expanded production.<sup>36</sup>

A "strategic diet," such as the one whose general composition is summarized in Table 42, must be made up of foods that can be produced eco-

TABLE 42

COMPARISON OF "ROCKBOTTOM" AND "STRATEGIC" CIVILIAN DIET PROPOSALS WITH APPARENT CONSUMPTION DURING 1935-1939 AND 1942

Pounds per capita per year—retail weight basis

Food Categories	Actual Average 1935-39 Con- sumption	Actual 1942 Con- sumption	Proposed "Rockbot- tom" Diet	Proposed "Strategic" Diet
Dairy products <sup>1</sup> .....	437	491	469	378
Meat, poultry, fish and eggs <sup>2</sup> ....	168	183.7	172	48
Fats and oils <sup>3</sup> .....	64	66	64	60
Sugar, syrups, preserves .....	106	103	75	59
Potatoes and sweet potatoes .....	127	114	142	282
Dry beans, peas and nuts .....	14.1	16.7	16	48
Tomatoes, citrus fruits .....	84	98	76 <sup>4</sup>	171
Leafy green and yellow vegetables	90	104	61 <sup>5</sup>	189
Other vegetables and fruit .....	212	207	189 <sup>5</sup>	83
Flour, cereals .....	200	202	203	249

<sup>1</sup> Milk equivalent, non-fats solids basis.

<sup>2</sup> Excludes bacon and salt pork.

<sup>3</sup> Includes butter, bacon and salt pork as well as other fats.

<sup>4</sup> Allowing for 5% wastage between retail and preparation for consumption.

<sup>5</sup> Allowing for 10% wastage between retail and preparation for consumption.

Source: 1935-39 and 1942 data estimated by War Food Administration in *House Hearings on Agriculture Department Appropriation Bill, 1946*, Part 2, p. 82. "Rock-bottom diet" prepared by Office of Civilian Requirements, War Production Board, October 29, 1942. "Strategic diet" prepared by Civilian Requirements Branch of War Food Administration, August 9, 1943.

nomically in terms of land, manpower and equipment and that can also be distributed with a minimum of wastage. Among them should be no foods which would be rejected by any considerable part of the population by virtue of food habits, taste or religious taboos. Moreover, such a diet should not reduce food bulk to a point where consumers would be left feeling hungry.

Comparison of the "strategic diet" with recent consumption patterns highlights the direction of recommended changes. A larger proportion of proteins would be drawn from milk, beans and peas, peanuts and soy-

<sup>36</sup> Prepared by the Staff of the Civilian Requirements Branch, Food Distribution Administration, under the direction of Dr. Russell M. Wilder, Chief of the Branch, and also Professor of Medicine, Mayo Clinic, Rochester, Minnesota; presented in *Senate Hearings on War Mobilization*, Part 2, galley, pp. SO 30-32, 51.

beans. More vegetable fats would be substituted for lard and butter. Grain products and potatoes would contribute more heavily to caloric requirements, compensating for the reduced consumption of sugar and syrups. Increased emphasis would also be laid on shifting to those fruits and vegetables which are richest in essential vitamins and minerals. A less extreme estimate of "rockbottom" civilian needs, prepared nine months earlier by the Office of Civilian Requirements,<sup>37</sup> concurs in the direction if not the extent of most of these proposed adjustments, with serious disagreement evident only in regard to which categories of fruits and vegetables should be emphasized more heavily in proposed production programs.

Since there is no inherent virtue in excessive sacrifice, the adjustments outlined by the "strategic diet" need have been pursued only to the extent made necessary by the inability of strenuous agricultural mobilization efforts to keep pace with war demands. It will be useful, nevertheless, to explore the extent of our safety margins which obtained at that time.<sup>38</sup> For example, far reaching as it was, the "strategic diet" was not only a line that could be held indefinitely with full safety to the health and vigor of the civilian population, but it provided for substantially larger quantities of essential minerals and vitamins than the American people had secured thitherto.<sup>39</sup> Such circumscribed rations would inevitably have been attended by some monotony. But the palatability of the resultant diet would have been rendered endurable by the realization that the sacrifice of

37 Submitted to the Office of Agricultural War Relations by the Office of Civilian Requirements, War Production Board, October 29, 1942 as revision of earlier estimates.

38 Another significant application of the "strategic diet" would have been to provide a practical means of assessing the absolute inadequacies of food rations in liberated areas.

### 39 NUTRITIONAL ADEQUACY OF RESTRICTED CIVILIAN DIET PROPOSALS

Average Quantity per Capita per Day

Nutrients	Unit	Minimum Requirement <sup>1</sup>	1943 Supply <sup>2</sup>	OCR "Rock-bottom" Diet <sup>3</sup>	"Strategic Diet" <sup>4</sup>
Food Energy	Cal.	2,700	3,390	3,044	2,960
Protein	Gm.	65	98	83	88
Calcium	Mg.	930	1,040	810	970
Iron	Mg.	12	16.5	13	21
Vitamin A	I.U.	4,500	9,200	5,496	13,380
Ascorbic Acid	Mg.	71	126	92	110
Thiamine	Mg.	1.5	2.2	2.0	2.6
Riboflavin	Mg.	2.2	2.2	1.7	2.3
Niacin	Mg.	15.0	19.0	15.0	23.0

<sup>1</sup> Allowances recommended by National Research Council.

<sup>2</sup> From Table 40.

<sup>3</sup> William Ockey, Office of Civilian Requirements, War Production Board, Revised as of Dec. 1, 1942.

<sup>4</sup> Civilian Requirements Branch, Food Distribution Administration.

taste preferences promised possible increases in the output of essential nutrients aggregating up to as much as 40 percent within two years. Most consumers could probably have been persuaded that the minor discomfort of eating adequately but with less zestful variety would have been but a small price to pay for the miracle of being able to provide supplementary half rations to perhaps 120 million people, who had not only endured severe privations during the war but who faced further hunger and suffering after liberation.

Domestic civilian consumption of various foods fluctuated, of course, from year to year. But in most instances, these changes were relatively small in scale, were frequently opposed in direction to the foregoing suggestions, and were attributable primarily to factors other than a conscious program to adjust consumption patterns in the interests of maximizing the contributions of U. S. agricultural resources to the United Nations' war effort.

### 3. CONSUMPTION GOALS AND AGRICULTURAL MOBILIZATION

The foregoing "strategic diet" may or may not have been the best that could be devised; and it certainly mapped out potential adjustments far beyond immediate needs. But whatever the character of the decisions finally adopted, the provision of clear, consistent guides to the conversion of the entire process of food production, distribution and consumption required the prior official determination and announcement of the relative essentiality of specified quantities of various crop and livestock products.

No realistic supply program can be developed without allowing for the mutual adjustment of consumer preferences and producer preferences. In a period of purposive planning, however, the primary emphasis in formulating such programs must be on maximizing progress toward stipulated objectives. Accordingly, it was necessary during the war not only to effect the mutually acceptable compromise of producer and consumer preferences, but to allow even heavier weight to so modifying each of these and both together as to ensure the greatest possible fulfillment of total essential food requirements.

Taste preferences, commonly regarded as subtle and highly variable, actually tend in large measure to be well-defined and most tenacious—and hence could be expected to reinforce the production of comparatively less essential peacetime delicacies unless actively discouraged. Although actual experience during the war demonstrated that consumption would readily absorb whatever substitute goods the market offers when original preferences cannot be met, neither the pattern of peacetime preferences nor the

current readiness of consumers to purchase almost anything quite assured the most effective employment of agricultural resources in the absence of authoritative guidance. Moreover, habitual farm production patterns are reinforced, as noted earlier, by the specialized equipment and facilities that farmers possess, by their knowledge and experience in handling accustomed crops, and by the coercions implicit in existing marketing channels, in traditional renting arrangements and in the common bases for estimating credit standing.

With the composition of producer and consumer preferences molded by such pressures as the foregoing, it is apparent that mutually acceptable compromises between these two, relative to the product allocation of available farm resources, offered little promise of congruence with mobilization dictates. In the face of essential foreign and domestic requirements far in excess of current output, effective food management required that actual consumption goals be driven further back from consumer preferences toward the nutritional requirements necessary to sustain vigorous health, and also that production goals be driven further back from producer preferences toward practicable output potentials. It is true that any given pattern of nutritional requirements can be met through a wide variety of food combinations. But the multiplicity of such alternatives is sharply reduced if one seeks to maximize the output of a stipulated pattern of nutrients, for it then becomes necessary to choose among the several sources of needed nutrients those crop and livestock products which yield the greatest returns per unit of scarce productive resources required.

Application of the above requirements-centered approach would have required a process of establishing successive annual goals as well as a guiding framework of peak mobilization objectives differing in several important respects from that actually employed. The envisioned sequence would presumably have encompassed the following stages:

1. Determination of total requirements for all major claimants in terms of the foodstuffs specified by each, with requests scaled down only in accordance with established criteria of essentiality rather than in accordance with prospective supplies as well.
2. Appraisal of production potentials on the basis of the above pattern of output as a preliminary to estimating the scale of indicated shortages relative to requirements in terms of preferred foodstuffs.
3. In order to provide guides for proposing adjustments commensurate with the indicated scale of shortages:
  - a. Translation of total requirements into terms of needed nutrients;
  - b. Analysis of the relative efficiency of various crop and livestock products in converting available productive resources into needed nutrients.

4. Progressive substitution of more efficient sources of nutrients for less efficient foodstuffs sought by claimants, either up to whatever level is necessary to equate requirements and expected output, or up to whatever level may be adjudged capable of attainment after taking into consideration the practicable limits on the rates at which production and consumption adjustments can be effectuated even within an atmosphere of patriotism.
5. Final definition and announcement of food production, domestic consumption and export allocation goals for all principal foodstuffs, not only in absolute quantity terms but also in terms of their proportions relative to the total essential requirements which were the major determinants of the proposed pattern of adjustments.

Effective execution of some such program as has just been outlined would also have required certain adjustments in the organizational arrangements underlying the process of formulating goals. Production considerations had long dominated the operations of the Department of Agriculture, not only by virtue of its official functions and its traditions but through the very background of its personnel. The field organizations, developed during the seven years prior to the war for the purpose of administering the agricultural production control programs, served further to strengthen the Department's responsiveness to producer preferences. Moreover, from the very outset production goals were established only after the intimate participation of farmers and of their directly elected representatives. Lacking comparable ties with consumers, and lacking substantial consumer participation in its operating agencies, the Department and the War Food Administration were probably better fitted to serve as claimants on behalf of the needs and desires of agricultural producers than to offer disinterested adjudication even to the competing preferences of domestic consumers and producers—to say nothing of assuring adequately weighted consideration to the urgencies of meeting overseas as well as domestic food requirements. As a matter of fact, however, the War Food Administration assumed the role of consumer claimant as well, through the Civilian Requirements Branch of the Food Distribution Administration, and also arrogated to itself the role of determining final allocations through its Requirements and Allocations Control. This organizational structure could not but tend to disadvantage consumption-oriented and requirements-oriented efforts to materially alter the pattern of agricultural production.

Not only did agricultural officials tend to submerge the primacy of requirements urgencies in the determination of food policy objectives, but they were surprisingly neglectful of the powerful aid that might have been

rendered to their efforts by the active participation of informed consumers, especially valuable because of the voluntary nature of the production programs. The involvement of responsible consumer representatives in the formulation of wartime modifications in civilian diets designed to maximize fulfillment of all essential needs, and the enlistment of widespread organized consumer support for such proposals, could have helped to effect the channeling of consumer expenditures so as to encourage the planned conversion of farm production instead of offering tempting rewards to farmers who continued to produce the agricultural equivalent of chromium-plated automobile bumpers.<sup>40</sup> Similar consumer participation would have minimized the possibility, often emphasized to government officials by producer and distributor groups, that consumers would exercise political retaliation against those who coerced them into accepting consumption restrictions. Nor is it improbable that much of the delay which attended conversion efforts was made possible by the apathy of a basically inadequately informed and neglected electorate.

<sup>40</sup> For example, the designation of watermelons and canteloupes as inessential led many farmers to discontinue their production. But the resultant short supply apparently brought about such extraordinarily high prices that many farmers were induced to give up more essential crops to share in these windfall profits. (Testimony by Roy F. Hendrickson in *Senate Hearings on War Mobilization*, Part 2, galley, p. KH 9.)

## CHAPTER XII

### FOOD DISTRIBUTION

INADEQUACIES in the mobilization of agricultural production bore most heavily on overseas claimants, who were unable to secure desperately needed foods, and on domestic war industries, which were deprived of additional manpower, raw materials and production facilities. In contrast, shortcomings in the conversion of food distribution resources were saddled most directly on civilian consumers, by denying large numbers of them a full and fair share of the enormous supplies allocated for their needs.

Broadly defined, distribution encompasses the entire process from the acquisition of farm food products through the packing, transportation, processing, storage and merchandising stages whereby they eventually reach retail outlets. The enormous scale of the resources devoted to these services is apparent from the fact that in 1939 they cost the nation 13 percent of its total disposable income and absorbed manpower equivalent to the full-time employment of 4 million persons.<sup>1</sup> The wartime efficiency of the process can be measured by such indices as the thoroughness with which all farm supplies available for sale were gathered into the distribution mechanism, by the extent to which agricultural products and distribution resources were economized during the course of transmission from farms to consumers, by the congruence of regional distribution patterns with planned civilian rations, by the adequacy of contingency reserves designed to guard against possible interruptions to the distribution flow, and by the effectiveness of distribution performance in reinforcing the attainment of over-all United States wartime food objectives.

Analysis reveals that the wartime conversion of the unwieldy and wasteful distribution processes engendered by peacetime competition for limited consumer expenditures was unduly modest. Inessential distributive services, costly spoilage of supplies, excessive deference to wasteful habits and customs, and widespread competitive duplication of facilities continued to exact heavy drains from available resources.

The modest extent of mobilization achievements in the realm of distribution is traceable to several factors. Slow progress in the conversion of agricultural production prevented any strong pressure for haste from that quarter. Emergence of a "seller's market" virtually eliminated the normal coercions exercised by dissatisfied purchasers. Most significant of all, no broadly conceived program of practical step-by-step conversion was

<sup>1</sup> *The Marketing and Transportation Situation*, December 1945-January 1946, p. 3.

put forward by authoritative quarters as a basis for encouraging, guiding and perhaps even prodding necessary adjustments to war needs. As a result, the burdensome distribution toll common to peacetime continued to contribute materially to the frustration of food mobilization objectives.

Intermediate between the farmers and the consumers, the distribution mechanism should have been so organized as to reinforce the conformance of agricultural production with planned consumption goals. War requirements necessitated changes in the relative output of various crops and in their regional distribution. Lags in the adjustment of distribution facilities to these modifications were certain not only to cause serious wastes in food supplies and the under-utilization of distribution resources, but also to strengthen the inertias of unconverted production.

### I. FROM FARM TO RETAIL

The structure of distribution is so complex, so variable from commodity to commodity, that nothing more can be attempted in this presentation than to summarize the general extent of mobilization achievements and to highlight some of the operating segments where important potentials continued unrealized.

#### *Gathering of Farm Products*

Striking weaknesses in the effectiveness of food distribution operations were discernible at the very outset of the process, for a substantial gap was to be found between the volume of products available for sale on farms and the amounts that actually entered normal distributive channels.

One reason for this inadequacy in the assembly of already harvested crops was the lack of a thorough system of field intelligence to keep the Food Distribution Administration and its successors continuously apprised of the condition and expected harvest date of every acre of food crops in the country. Only thorough pre-planning on the basis of such information could sufficient provision have been made for assuredly picking up not only the crops grown on a large scale in traditional areas of specialization, but also those grown in small quantities by great numbers of new producers, many of them located in the "back country" and many others in areas where such crops had not heretofore been grown for sale. Without such aid, large quantities of perishable foods were lost either through unexpected gluts beyond the capacity of local marketing facilities, or through a failure to extend collection facilities to new and to remote areas of production. What agricultural officials termed "flash floods" of supply resulted in the spoilage of harvested potatoes, string beans and a



variety of other fruits and vegetables.<sup>2</sup> Further losses took the form of permitting matured crops to go unharvested in view of the absence of market demand.<sup>3</sup> In the case of other types of farm production, some value was salvaged from unmarketable surpluses by feeding them to cattle and by other not fully satisfactory means of disposition.<sup>4</sup> The harmful effects of these losses in many instances extended beyond the crop season in which they occurred, for many of the disappointed and unrewarded growers were less amenable to government suggestions thereafter.<sup>5</sup>

The gathering of marketable supplies from farms was also characterized by the inefficient employment of distribution facilities. In the collection of milk and cream alone, for example, it is estimated that more than 125,000 trucks daily travelled in excess of 5½ million miles.<sup>6</sup> Shortages of tires, tubes, trucks and gasoline and the need to conserve manpower emphasized the importance of reducing this drain to a minimum. As a matter of fact, a variety of field studies suggested that the reorganization of milk and cream hauling might be expected to reduce both truck re-

2 During 1943, for example, large quantities of string beans and new potatoes were lost throughout the South, but especially in the Southeastern states, through the swamping of market outlets. Similar losses also affected the supply of such desperately needed farm products as Midwestern soybeans, Southern peanuts, Western oranges, and small-farm egg production in various parts of the country.

3 The rise in labor costs helped to stimulate the practice of letting grown crops rot in the fields when profitable outlets were not readily available and also of turning the livestock free to root them out as feed. For example, approximately one-third of the Texas cabbage crop was unharvested in 1942; despite the vital need for fats and oils, much of the 1942 peanut crop was harvested by running hogs through the fields; and in 1943, much of the Southern spinach crop was turned under, along with other vegetables.

4 According to an unpublished estimate by the Bureau of Agricultural Economics, in 1942 more than 30 billion pounds of nutritionally-rich skimmed milk and buttermilk (more than three-fourths of the total supply) remained on farms to be fed to livestock or to be wasted.

Emergency efforts to dispose of surplus potatoes included canning, conversion into alcohol, processing into starch and feeding to livestock. (Testimony of Roy F. Hendrickson, *Senate Hearings on War Mobilization*, Part 2, galley, p. KH 5.)

5 In California, "a 25% increase in [carrot] production was [sought]. Instead of turning up with a 25% increase, they turned up with a 65% increase, and there are carrots all over the place.... The unfortunate part is some have dropped [watermelons and canteloupes] to go into what they were told were more essential crops". As a result of the bumper prices for non-essentials and the losses on carrots, "you will find yourself hard put to find people raising carrots in California on anywhere near the level that they raised them this year." (*Ibid.*, p. KH 9.)

For a report on the similar situation in regard to potatoes, see *Business Week*, April 15, 1944, p. 50.

6 Farm Credit Administration, *Co-operative Reorganization of Milk and Cream Hauling*, Miscellaneous Report No. 53, May 1942, p. 2.

quirements and mileage by as much as 50 percent.<sup>7</sup> Similar opportunities abounded in other sectors of agricultural marketing.<sup>8</sup>

A second cause of diversions of food from regular marketing channels was an intensification of farmers' normal practice of withholding some of their production for local sale. General shortages of certain foods and the attractive level of retail prices encouraged such withholding to the point where the per capita food supply in rural areas was appreciating steadily at the expense of urban consumers.<sup>9</sup> Farm-slaughtered meat, milk, butter, eggs, fresh vegetables and fruit were among the foods entering local trade in a widening stream, to constitute what one writer termed a "gray market."<sup>10</sup> Unfortunately, no effective measures were developed to prevent further enlargement of this diversion from established patterns of sharing between town and country. For this reason, and because food management officials remained reluctant to reallocate food ration currency as between rural and urban consumers, these discriminatory imbalances continued to worsen.

Uncontrolled as was agricultural production, the initial stages of food distribution were even more free of guidance by the Federal government—although this relationship was reversed beyond the point where rationing controls became operative. Food distribution officials lacked comprehensive and reliable information detailing the disposition of marketings by types of buyers and by eventual geographical destination. Since the innumerable produce buyers who purchased most of the nation's food supply at its source had inevitably to operate in accordance with profit considerations, they could not be expected to glean the output of every small farmer inspired by Federal requests to devote an acre or two to essential crops. Since there was no means of distinguishing between the representatives of legitimate and of black market distribution channels, neither farmers nor initial buyers could effectuate personal intentions to shun illegal agents. Without complete marketing records which could be compared with production statistics, it was difficult to determine even the proportion of local production which had not yet reached the market and

<sup>7</sup> *Ibid.*, p. 6.

<sup>8</sup> D. O. Hammerberg, Connecticut Milk Administrator, summarized a number of studies indicating what enormous savings could be effected not only in the collection of milk and cream but also in the retail delivery of milk, in the transportation of eggs and in the farm delivery of petroleum products in "Wartime Problems of Conservation of Transportation", *Journal of Farm Economics*, February 1943, pp. 147-163.

<sup>9</sup> Statement by S. R. Smith, Deputy Director of Food Distribution, *Senate Hearings on War Mobilization*, Part 2, galley, p. SO 36.

<sup>10</sup> C. A. Anderson, *Food Rationing and Morale*, Iowa State College Press, March 1943, p. 19.

which hence might have warranted the dispatch of special pick-up facilities to ensure their addition to the national larder. Lacking appropriate data, it was still more hazardous to estimate what proportion of local marketings might have been consigned to outlets which were suspect.<sup>11</sup> Thus, at the important point where harvested supplies were to be transferred from farms into the distribution apparatus, food management authorities lacked both information and control over the proportion which remained ungathered on farms, and also over the portion of marketings which was diverted from legitimate trade channels.

### *Food Losses in Distribution*

One of the heaviest costs of distribution was the spoilage and other forms of food waste which had long accompanied every stage in the transmission of agricultural products from the harvest fields to the consumer's table. According to the careful estimates presented in Table 43, such losses equalled two and one-half times the total food shipped to all foreign claimants in 1942, even when consumer wastes were excluded.<sup>12</sup> Inclusion of the latter as well would have raised the total to almost one-fourth of our national production. It is indicative of the seriousness of this problem that anticipated food wastes during 1943 exceeded the total increase in agricultural production that had been achieved since 1940.<sup>13</sup> Although a number of informational campaigns were undertaken to curtail such losses, it was reported during the spring of 1946 that waste still accounted for "about 25 percent of the Nation's food supply every year."<sup>14</sup>

11 Despite the intensive efforts that had been made to control the distribution of meat supplies in the U. S., an authoritative report to the Senate Sub-committee on War Mobilization commented that, "It is very difficult to estimate the quantity of meat going through the black markets. There are certain trends, such as the increased receipt in country hides, the decrease in the proportion of livestock slaughtered at central markets in relation to livestock receipts at those markets, and the decline in federally inspected veal slaughter, which indicate that there has been considerable diversion of slaughter from regular commercial channels, but it is almost impossible to use the figures available as a quantitative measure of black market." (From a statement submitted to the subcommittee by the Livestock and Meats Branch, Food Distribution Administration, August 14, 1943.) Also see the previously cited report of a special House Committee, *Food Shortages*, pp. 10-13.

12 Chapter X. A less conservative estimate was attributed to Miss Alice Nichols, manager of the Food Conservation Campaign for the Food Distribution Administration, who was reported to have said that, "the biggest reserve of food therefore is in the 30-40% which for one reason or another is lost between the farm and the garbage pail." (*Washington Evening Star*, June 20, 1943.)

13 See Table 5.

14 *Washington Post*, May 26, 1946. This report goes on to note that according to the Stanford University Food Research Institute, "Americans waste enough food to add 300 calories a day to the diet of each of the earth's 500 million starving persons."

TABLE 43  
ESTIMATED FOOD WASTE IN DISTRIBUTION, BY COMMODITY GROUPS

Commodity Groups	The Farm (After Production)	Stage of Distribution					Retail	Consumer	Total
		Transportation	Storage	Processing	Wholesale				
	%	%	%	%	%	%	%	%	%
Dairy products .....	17.5 <sup>1</sup>	0.3	**	1.0 <sup>1</sup>	**	0.25	1.5	20.55	
Meat, poultry, fish .....	1.5 <sup>2</sup>	0.3	0.5	2.5	1.0	1.5	7.0	14.30	
Eggs .....	1.0	1.0	0.5	**	0.25	0.25	1.0	4.00	
Potatoes .....	7.0	1.0	5.0	1.0	1.0	3.0	10.0	28.00	
Dry legumes and nuts .....	9.0	**	5.0	34.0	**	0.25	2.0	50.25	
Tomatoes & citrus .....	7.0	3.0	2.0	5.0	2.0	8.0	6.0	33.00	
Leafy green & yellow veg. ....	12.5	3.0	1.0	5.0	2.0	7.0	12.5	43.00	
Other vegetables .....	8.0	2.0	1.0	5.0	1.0	4.0	8.0	29.00	
Deciduous fruits .....	8.0	3.0	1.0	3.0	1.0	7.0	3.0	26.00	
Cereals and flour <sup>3</sup> .....	13.0	**	4.0	14.0	1.5	1.5	5.0	39.00	
Sugar and syrups .....	1.0	**	**	1.0	**	**	2.0	4.00	
Butter and fats .....	1.0	**	**	0.5	**	**	5.0	6.50	
Coffee, tea, chocolate & spices	...	**	1.0	1.0	**	**	5.0	7.00	
All Foods <sup>4</sup> .....	9.1	0.9	1.5	4.3	0.8	2.4	4.7 <sup>5</sup>	23.70	

<sup>1</sup> Quantities of dry skim milk used for feed on farms are included only at the farm level and not at processing level.

<sup>2</sup> Includes waste on fishing vessels.

<sup>3</sup> Excluding grains used for feed with the exception of wheat.

<sup>4</sup> Weighting by the average per capita for consumption of different commodity groups in the period 1930-41.

<sup>5</sup> Estimated at 15% of the food purchased by housewives by the Nutrition and Food Conservation Branch, Food Distribution Administration.

Note: When relative wastes occur in the form of feeding humanly edible foods to livestock, a net waste was computed by making allowance for the livestock products produced by the feed. Grains fed to livestock, with the exception of wheat, were not considered as being wasted.

\*\* Less than 0.25%.

Source: William Kling, "Food Waste in Distribution and Use", *Journal of Farm Economics*, November 1943, p. 858.

Note: Although Mr. Kling labeled the above estimates "tentative, incomplete, preliminary and unofficial," they were cited as the basis for waste allowances in official estimates of the nutritive value of the civilian food supply submitted to the House Committee on Appropriations by S. R. Smith, Deputy Director of the Office of Distribution, War Food Administration. (*House Hearings on Agriculture Department Appropriation Bill for 1946*, Part 2, p. 83.)

Although food losses in transportation are estimated to have been substantially less heavy than those suffered on farms prior to the sale or consumption of harvested crops, the net drain was sizeable enough to have warranted intensive remedial efforts. Defective packaging, the intermixture of sound and over-ripe foods, and careless loading and handling were among the least justifiable contributory causes. Inadequate refrigeration facilities, traffic delays in transit and the continuance of wasteful cross-hauling represented less easily controlled causes. The scale of resultant losses was indicated by the fact that, "Based on damage claims paid by Class I railroads, food losses in transportation would appear to be around 2 percent of the total food moved. Actual losses are doubtless above this level."<sup>15</sup>

Even heavier losses were sustained in storage. Deficient techniques of stacking, ventilation and rodent and insect control caused wastage whose magnitude was multiplied by the tremendous increases in warehousing occasioned by government loan, purchase and "set-aside" programs. Rats alone took a toll of food each year equal to the total production of approximately 240,000 farmers.<sup>16</sup> Even excluding the damage caused by the rice weevil, insects destroy at least 5 percent of the stored grain and cereal products produced annually in the United States.<sup>17</sup> Additional storage wastes were caused by the extreme shortage of warehouse space on farms and in distribution centers.<sup>18</sup>

Food processing, it will be noted in Table 43, is estimated to have accounted for greater food losses than transportation, storage and wholesale marketing combined. Perhaps the two factors most responsible for such wastes were the dispersion of processing capacity into many, small, under-equipped and under-employed units, and the failure to adjust processing methods so as to conserve the nutritional value of incoming foods. Most small units lack sufficient facilities for rapid processing to prevent heavy losses of perishable crops during the concentrated harvest season. A low average level of operations during the year discourages the special effort and investments that would be required to salvage the by-products of food processing, as is evident from the wastefulness of small slaughter

15 War Food Administration, *Facts on Food Waste*, October 1943, p. 2.

16 War Food Administration, *The Conservation of Food*, March 1944, p. 6.

17 J. A. Hyslop, *Losses Occasioned by Insects, Mites and Ticks in the U. S.*, U. S. Department of Agriculture, July 1938, p. 22.

18 For example, it was estimated by the Program Analysis and Appraisal Branch of the Food Distribution Administration in April 1943 that, "at least 3% of the commercial sweet potato crop is lost to decay on the farm." (*Summary-outline: Food Waste in Distribution.*)

houses in comparison with the proverbially complete utilization achieved in leading meat packing plants. Losses due to spoilage and other operating inefficiencies likewise bulk large whenever marginal processing facilities are employed.

The wastefulness of food processing techniques themselves have become fully apparent only in recent years, with the development of simpler and more precise quantitative tests for essential nutrients. As a result, it is evident that heavy processing losses were encountered not only in the milling of white flour and in the refining of sugar but also throughout the canning and dehydration industry, except where careful quality controls were maintained. Laboratory tests of processed foods indicated losses up to 40 percent in the ascorbic acid (vitamin C) content of tomato juice, up to 50 percent in the thiamine content of canned peas, up to  $\frac{7}{8}$  in the thiamine content of canned pork meat products, and up to 90 percent in the vitamin A content of butter and of canned salmon.<sup>19</sup> This heavy toll continued to negate much of the tediously produced contribution of farmers, despite the existence of quality control techniques capable of curbing such drains.

Storage wastes accounted for most of the food losses which occurred at the wholesale and retail stages of the food distribution process. Overstocking relative to consumer demand and the perishability of many foods, especially of fresh fruits and vegetables and of bakery products, were the prime causes of the estimated loss of 3 percent of all foods sold in retail stores.<sup>20</sup> A study of fruit spoilage at retail outlets in New York City revealed that such losses ranged in scale from 3.7 percent of all sales during November to 6.5 percent at the height of the summer season.<sup>21</sup> A similar study of waste and spoilage of fresh fruits and vegetables in Washington, D. C. retail outlets placed the weighted average of such losses at 6.48 percent of the total handled.<sup>22</sup> Although such losses were generally con-

19 A partial survey of nutritional losses in food processing is available in Circular 638 of the Department of Agriculture, *A Compilation of the Vitamin Values of Foods in Relation to Processing and Other Variants*, May 1942.

20 *Facts on Food Waste*, p. 2. The cost of retail food losses was estimated at \$450 million for 1942.

21 M. P. Rasmussen, F. A. Quitslund, and E. W. Cake, *Retail Outlets for Fruit in N. Y. City*, Farm Credit Administration, Bulletin 52, June 1941, p. 58.

22 W. H. Stolting and A. L. Meyers, *Food Waste and Spoilage in Washington, D. C. — July 29 to September 14, 1940*, Bureau of Agricultural Economics, June 1943, p. 7. Although this study was conducted during the summer, evidence is cited (page 5) suggesting that the differential between summer and winter in such losses is not always as extreme as was found in the N. Y. City report mentioned immediately above.

sidered to be much lower at the wholesale level, a study of the New York City Wholesale Produce Market by the Department of Agriculture in 1940 "indicated a loss of 7 percent in the wholesale phase of distributing fresh fruits and vegetables in that area."<sup>23</sup>

Estimates of food wastes by consumers cover a broad range. Table 43 placed them at the conservative level of 4.7 percent of all food entering distribution channels. According to the Nutrition and Food Conservation Branch of the Food Distribution Administration, however, "analysis of food studies shows that on the average each one of us throws out 225 pounds of usable food each year; that we waste 15 percent of all food that is brought into the home."<sup>24</sup> Even the latter of these estimates related only to the proportion of edible foods thrown out as garbage.<sup>25</sup> The totals would have been even more striking if losses in the nutritional value of foods prior to consumption, as a result of home storage and cooking, had also been included.<sup>26</sup>

Having noted the cautiousness of the data contained in Table 43 at every stage of distribution, it is all the more shocking to contemplate the enormous totals which even these minimal estimates of food losses aggregated: between one-third and one-half of all dry legumes and nuts, tomatoes and citrus fruits, leafy green and yellow vegetables, and cereals and flour; more than 20 percent of dairy products, potatoes and all other fruits and vegetables; and approximately 15 percent of all meat, poultry and fish.

Food waste was clearly no minor problem to be dismissed with occasional admonitions to the public. Its control required organized action on a scale whose dimensions were suggested by the fact that 1943 food wastes exceeded in volume the total production gains achieved by three years of nationwide mobilization in agriculture; and by the fact that such wastes were greater than the total U. S. food supplies allotted both to our armed forces and to our fighting Allies.

<sup>23</sup> War Food Administration, *Facts on Food Waste*, p. 2.

<sup>24</sup> Food Distribution Administration, *Discussion Guide on Food Conservation for Use by Women's Groups*, November 1943, p. 1.

<sup>25</sup> One might also note in this connection the estimate of the Bureau of Foreign and Domestic Commerce that 500 million pounds of fat for lard were lost because the War Food Administration failed to require meat packers to remove more fat from hog carcasses. (*Business Week*, Feb. 12, 1944, p. 36.)

<sup>26</sup> "Storage and improper cooking may reduce the vitamin content of foods from one-third to one-half." (Statement of Dr. Russell M. Wilder, *Senate Hearings on War Mobilization*, Part 2, galley, p. SO 22.)

*Utilization of Distribution Resources*

The adjustment of food distribution resources to the modest changes taking place in farm production and domestic consumption was effected without serious problem or incident. The generous excess of pre-war capacity relative to actual requirements generally precluded the threat of facilities shortages.<sup>27</sup> Manpower reserves were curtailed, of course, but to less marked a degree than in a number of key war industries. Indeed, the under-utilization of available distribution facilities and the diversion of such resources to inessential goods and services constituted more of a problem from the standpoint of national food mobilization than any general shortages in distributive resources, with the single exception of certain storage facilities.

The under-employment of distribution facilities was pervasive. Cotton ginning capacity was more than double actual requirements.<sup>28</sup> Fruit and vegetable processing facilities were not only idle much of the year, but were still handling inessential as well as war crops during seasonal peaks.<sup>29</sup> The production of dry skim milk, of vital importance for military and lend-lease needs, was at least 20 percent below plant capacity and probably more.<sup>30</sup> Even in 1943, the milling of wheat flour was expected to fall 30 percent short of available capacity.<sup>31</sup> Despite the expected record slaughter of livestock during 1944, no greater adjustment was expected to be necessary in transporting and processing these numbers than "to spread out the shipments within the week and perhaps from one week to another during the heavy marketing period."<sup>32</sup>

Although the rising tide of military movements and of industrial shipments imposed heavily mounting burdens on the nation's transportation resources, agriculture continued to enjoy reasonably favorable allocations

<sup>27</sup> *The Marketing and Transportation Situation*, October 1944, p. 3. Also see *The Agricultural Situation*, November 1944, p. 19.

<sup>28</sup> Although cotton matures over a three month period, available ginning capacity could process the entire crop in less than four 72-hour weeks. (Estimate attributed to Program Analysis and Appraisal Branch, Food Distribution Administration, by Roy F. Hendrickson, personal interview, June 1943.)

<sup>29</sup> Statement by S. R. Smith, Deputy Director, Food Distribution Administration, *Senate Hearings on War Mobilization*, Part 2, galley, p. SO 38.

<sup>30</sup> Based on unpublished estimates of the Office of Distribution, War Food Administration, February 1944.

<sup>31</sup> From statement submitted by S. R. Smith, Deputy Director of the Office of Food Distribution, War Food Administration in *Senate Hearings on War Mobilization*, Part 2, galley, p. SO 35.

<sup>32</sup> *The Marketing and Transportation Situation*, September-October 1943, p. 5.



of available facilities even as the war effort approached its climax. In respect to Great Lakes traffic, even the unprecedented demand for ore shipments failed to prevent a substantial increase in the eastward movement of grains, rising from 114 million bushels in 1942 to 165 million bushels in 1943<sup>33</sup> and to 374 million bushels in 1945,<sup>34</sup> to say nothing of additional facilities provided by Canadian vessels. Total truck registrations declined by 8 percent between 1941 and 1943,<sup>35</sup> but increases in the average loads carried and in the average frequency of trips per vehicle resulted in maintaining the total tonnage of agricultural commodities transported by truck during 1942 and 1943 well above the 1941 level.<sup>36</sup> At the same time, there was a progressive gain in the proportion of all agricultural shipments being moved by rail, the latter's share of the total growing from 49.9 percent in 1941 to 56.2 percent in 1943.<sup>37</sup> Between 1940 and 1943, the total tonnage of agricultural products transported by Class I railroads rose by 68 percent, while the increase in all other freight came to 45 percent; by 1945, such agricultural shipments had expanded to 180 percent of the 1940 level, while the comparable figure for all other freight had declined to 137 percent of its 1940 level.<sup>38</sup> Despite the fact that such enlarged allocations to agriculture could not but compound the difficulties faced by other shippers, distributors of farm products continued to waste a significant share of the freight capacity allotted to them in competitive cross-hauling,<sup>39</sup> and in moving crops that were inessential to the war effort<sup>40</sup> as well as others which were wasteful of transportation as well

33 *Food Program for 1944*, p. 68.

34 *The Agricultural Situation*, April 1946, p. 15.

35 *The Marketing and Transportation Situation*, October 1944, pp. 12-13.

36 *The Marketing and Transportation Situation*, January 1945, p. 10.

37 *Ibid.*

38 *Agricultural Statistics—1946*, p. 713.

39 This may be illustrated by noting the estimate of the Food Distribution Administration that in 1942 alone, and for only 9 markets, "over 3,000 carlots of potatoes were cross-hauled—Maine potatoes moving west to St. Louis or Chicago during months when Idaho potatoes were reported unloading at Boston, New York and Philadelphia." (*The Marketing and Transportation Situation*, November 1943, pp. 6-7.) For later reports on the continued cross-hauling of potatoes, see *Business Week*, February 10, 1945, p. 32 and *Wall Street Journal*, August 7, 1945. The competitive promotion of branded food products was, of course, a further important source of wasteful cross-hauling.

40 Of the 82,000 carloads of fresh fruits and vegetables shipped to New York, Boston, Philadelphia, and Washington, D. C. from the Far West in 1942, well over one-half were composed of inessentials and of those crops which represent a comparatively inefficient use of farm and rail resources. (*The Marketing and Transportation Situation*, November 1943, p. 5.)

as of farm resources.<sup>41</sup> A shortage of crating material was often alleged to be hampering the shipment of fresh fruits and vegetables, but here, too, the seriousness of the situation from the mobilization standpoint was minimized by the continued diversion of available packaging to inessentials and by the continued failure to effect full utilization even of used containers.

Storage requirements for farm products and processed foodstuffs rose steadily as a result of increased production, of centralized government procurement practices, of price-support programs, and of the need to accumulate the large holdings in port areas which were essential to the effective servicing of military and lend-lease shipping programs. In due course, therefore, the early disinterest of the Advisory Commission to the Council of National Defense<sup>42</sup> and of successor war agencies in proposals for augmenting certain categories of the nation's food storage capacity eventually came to fruition in the form of acute shortages, in resort to wasteful expedients, and in the necessity of introducing government restrictions on the utilization of available facilities. More important still, the emergence of such practical urgencies tended to magnify unduly the influence of storage considerations in the formulation of major food management policies.

With the supply of dry-merchandise warehouse space proving ample except for infrequent, brief and narrowly localized shortages, wartime storage problems centered around grain and cold storage facilities.<sup>43</sup> Grain stocks overflowed available capacity as early as 1942. Directly, this resulted in the piling of some supplies on open ground as well as in the movement of large quantities into what were officially admitted to be "unsatisfactory storage facilities."<sup>44</sup> Indirectly, such difficulties also tended

41 Incidentally, according to the final wartime report of the Director of the Office of Marketing Services in the War Food Administration, C. W. Kitchen, the first acute shortage of boxcars during the war did not appear until the winter of 1944-45, when severe winter storms in the Northeast dislocated the scheduled circulation of cars. (U. S. Department of Agriculture, *Report of the Director of the Office of Marketing Services, 1945*, U. S. Government Printing Office, 1946, p. 16.)

42 It may be of interest to note in this connection that the organization of the Farm Products Division of the Advisory Commission made no special provision for the entire area of marketing and distribution problems—its eight operating units being focussed on rural labor and plant location, foreign trade, new uses of farm products, phosphate-nitrate supplies, rural youth training, economic analysis and program planning. (*Farm Machinery and Equipment Policies of the War Production Board and Predecessor Agencies*, footnote, p. 16.)

43 *Food Program for 1944*, pp. 69, 71.

44 *Ibid.*, p. 71.

to reinforce official preference for a policy of reducing these accumulations through heavier feeding of livestock, as over against proposals for ever-expanding stockpiles in preparation for the recognizedly enormous needs of liberated areas. Grain storage problems were eased in 1943, as a result of increased consumption by livestock, only to grow critical once again during the last two years of the war, at which time they generated further dislocations in the agricultural mobilization program. For example, in August 1944, the inadequacy of grain storage facilities not only led to the heaping of harvested wheat on open ground but also endangered the effectiveness of the price-support programs as an incentive to farmer co-operation in officially recommended production adjustments. In this instance, the price of wheat fell below the parity level, and even below the government's guaranteed loan price, because farmers were prevented from qualifying for loans through their inability to provide the proper storage for pledged commodities as required by covering legislation, and because the Commodity Credit Corporation was prevented from buying grain offerings by the sheer lack of elevator space to receive further acquisitions.<sup>45</sup>

Shortages of cold-storage facilities, too, tended not only to impede distribution efforts, but to exercise unwarranted influence on major food management policies—illustrating the pervasive tendency of administration-in-action to stray from longer-range objectives and programs in the heat of seeking to cope with the attention-arresting dislocations of the moment. Increasing demands for cold-storage, especially for eggs, butter, meats, potatoes and apples,<sup>46</sup> finally compelled the introduction of government controls over the utilization of such facilities. Food Distribution Orders 70 and 90, issued on July 31 and December 22, 1943, respectively, denied access to general cold storage and to freezer space of a substantial list of commodities deemed by the War Food Administration and representatives of the warehousing industry to be least in need of such facilities.<sup>47</sup> Amendments to these orders during the following March set a maximum limit of 10 months on the period for which any commodity could remain in cold-storage, extended the list of foodstuffs altogether barred from such facilities, and forced an immediate 20 percent reduction in the quantities of frozen poultry and fruits and vegetables occupying

<sup>45</sup> *Business Week*, August 12, 1944, p. 10.

<sup>46</sup> War Food Administration, *Food Distribution Order 70*, July 31, 1943, U. S. Government Printing Office, 1943, p. 2.

<sup>47</sup> *Ibid.*; also see War Food Administration, *Food Distribution Order 90*, and *Food Distribution Order 90-1*, December 22, 1943, U. S. Government Printing Office, 1943.

refrigerated warehouse space.<sup>48</sup> In addition, a few warehouses were constructed in critical areas and a system of semi-monthly reports from cold-storage managers was initiated in order to help guide the allocation of available facilities.<sup>49</sup> Essentially, however, total cold storage capacity fell substantially short of requirements, with consequences for wartime food management which were summarized as follows by the Special House Committee to Investigate Food Shortages, under the chairmanship of Clinton P. Anderson who was shortly thereafter appointed Secretary of Agriculture:

One of the fundamental mistakes made in the war-food program was in the failure to expand cold-storage space in keeping with the increases in production which farmers were asked to make. . . . The lack of adequate storage space set off a series of forces that has contributed much to the existence of the current food shortage situation.

Instead of being in position to buy all of the surplus pork necessary to support producer prices during the winter of 1943-44, the lack of adequate storage forced the country into a program of eating its way out of the temporary oversupply. In the case of eggs, the lack of storage resulted in several hundred carloads of eggs being diverted to fertilizer, with a great deal of additional spoilage that was not accounted for in this way.

Their inability to cope with the problem of surpluses [due mainly to the lack of storage] turned official thinking toward reducing production. At the same time, the inability of the Government to meet its price-support obligations to producers discouraged farmers who had been asked for all-out production.<sup>50</sup>

In only one area were distribution facilities altered fundamentally in response to war requirements—in the spectacular development of food dehydration. By removing the water content of foodstuffs, such processing reduces their weight from 60 to 90 percent. Removal of the air from the resultant products through compression reduces their bulk by an additional 30 to 90 percent.<sup>51</sup> So important were the accompanying economies

48 War Food Administration, *Food Distribution Orders 70 and 70-1, Amendment 2, and Food Distribution Orders 90 and 90-1, Amendment 1*, March 21, 1944, U. S. Government Printing Office, 1944.

49 War Food Administration, *Report of the Director of the Office of Distribution*, 1944, U. S. Government Printing Office, 1944, p. 37.

50 *Food Shortages*, pp. 14-15.

51 Hon. Karl E. Mundt, *Congressional Record*, Appendix, July 19, 1943, p. A3945.

in shipping and warehousing space that lend-lease and military orders had increased the number of egg-drying plants from 18 prior to the war to 94 by March 1943, with an additional 29 under construction, simultaneously increasing total production 40 times. The production of dried milk was more than doubled. Vegetable dehydrating plants were increased in number from 20 to 110, with an additional 100 under construction during 1943. Before the end of 1943, 11 meat dehydration plants were expected to be in operation, along with plants capable of producing 7 million gallons of concentrated fruit juices.<sup>52</sup> So rapidly had dehydration facilities been expanded that no important shortages of capacity were expected in 1944.<sup>53</sup>

Some alarm was voiced occasionally about the reduction in retail outlets during the war. A study by the Department of Commerce found that the number of operating firms retailing food rose somewhat between 1940 and 1941, but declined during the succeeding two years to 18 percent below the 1940 total, and remained at that level during 1944 before turning upward again in 1945.<sup>54</sup> There can be no doubt that these closings caused consumers more or less temporary inconvenience in some areas. Nevertheless, this development may also be considered to have had wholesome effects. The economy of distribution had long been undermined by the excessive duplication of such facilities. As a result, consumers had borne higher marketing charges and retailers had suffered a frightening rate of bankruptcy. It is gratifying to note, therefore, that much of the thinning out of such establishments during the war was reported to be a voluntary process, motivated by more attractive employment alternatives.<sup>55</sup> Those who left apparently either entered the armed forces or turned to more essential and more remunerative civilian occupations. Their departure, in turn, benefitted those who remained behind. One might note in passing that, although marketing margins were limited by ceilings on prices paid by consumers and by government-supported farm prices, food distribution agencies reaped substantial benefits from increases in average volume per unit—as evidenced both by the steady

<sup>52</sup> Testimony of Edward R. Stettinius, Jr., in Senate Committee on Foreign Relations, *Hearings on Extension of Lend-Lease Act, 1943*, U. S. Government Printing Office, 1943, pp. 14-15. Also see U. S. Tariff Commission, *Dehydrated Vegetables*, War Changes in Industry Series Report No. 5, September 1944, especially pp. 11, 14.

<sup>53</sup> *The Marketing and Transportation Situation*, September-October 1943, p. 5.

<sup>54</sup> D. W. Paden and Alice Nielsen, "Recent Trends in the Business Population," *Survey of Current Business*, May 1946, p. 22.

<sup>55</sup> *The Marketing and Transportation Situation*, September-October 1943, p. 6.

decline in business failures among food marketing firms and by the maintenance of reasonable profit levels.<sup>56</sup>

### *Manpower in Distribution*

Food distribution officials frequently emphasized manpower as the most serious of their problems. There is no evidence, however, that the labor stringencies which affected every sector of the war economy exerted any disproportionately heavy impact on the distributive industries.

According to the most recent estimates available, employment in the manufacture of food and kindred products, roughly approximating the food processing industry, rose steadily from 1,223,000 in 1940 to 1,441,000 in 1944 before declining by one percent in 1945.<sup>57</sup> No comparably comprehensive estimates have been published on employment in the wholesale and retail food trades, but relevant data indicate that only slight reductions at most were experienced during this same period.

Total employment in all wholesale trades was higher both in 1941 and 1942 than in 1940, and declined only 5 percent below the latter in 1943, before turning upward again during the last two years of the war.<sup>58</sup> In view of the fact that the supplies of many other major categories of consumer goods were more severely curtailed than food products, it seems reasonable to assume that any reduction in employment in the wholesale food trade was of about the same order as affected the wholesale trades at large. Some confirmation for this view is provided by the finding of Social Security Board analysts that, among establishments covered by the Federal Unemployment Compensation Act, employment in wholesale establishments dealing with groceries, food specialties, beer, wines and liquor declined by only 3 percent from 1942 to 1943, compared with a decline of about 2½ percent in the Board's general category for wholesale trades.<sup>59</sup>

Employment in all retail trades, including automobile service establishments, exceeded 1940 levels in each of the succeeding years of the war,

<sup>56</sup> Manufacturers of food and kindred products, wholesalers of food and farm products, and food and liquor retailers all shared in the sharp reduction of business failures from 1942 to 1945. With respect to earnings, the Bureau of Agricultural Economics reported for 1944, for example, that, "All groups of food marketing corporations show 1944 profits as good or better than the average for 1935-39." (*The Marketing and Transportation Situation*, October 1945, p. 18.) Also see the section on returns to processors and distributors in Chapter XIII.

<sup>57</sup> *Survey of Current Business, Supplement*, July 1947, p. 36.

<sup>58</sup> *Ibid.*

<sup>59</sup> Unpublished data furnished by Bureau of Employment Security, April 1946.

reaching a wartime low in 1943 before beginning to expand anew.<sup>60</sup> Social Security Board data indicate that this very same pattern applied to employment in retail food and liquor establishments covered by the Federal Unemployment Compensation Act.<sup>61</sup> Similarly, according to the Bureau of Labor Statistics' sample surveys, average employment in the retail food trade remained above the 1940 level throughout the war, rising by about 10 percent from 1940 to 1942 and then fluctuating between two and five percent above the 1940 level during the next three years.<sup>62</sup>

Few parts of the nation's economy were more capable of fulfilling their tasks with even fewer personnel than the still over-inflated merchandising trades. It was regrettable, therefore, that representatives of this industry nevertheless saw fit to attack the War Manpower Commission vigorously for failing to accord it a preferential status.<sup>63</sup>

Despite the generally favorable manpower picture outlined above, some trouble spots did exist. One of the most important of these was in fruit and vegetable canneries, where labor shortages had by early 1943 become the cause of increasing operating difficulties and of increased spoilage within the expanded volume of perishables awaiting processing.<sup>64</sup> Average annual employment in canning and preserving rose by 15 percent between 1940 and 1942, only to decline by almost 12 percent in the following year.<sup>65</sup> Eighty percent of the labor requirements of fruit and vegetable canneries are highly seasonal, involving a six-fold expansion of working force between May and September followed by a decline to bedrock again by the end of the year.<sup>66</sup> Seasonality precluded the deferment

<sup>60</sup> *Survey of Current Business, Supplement*, July 1947, p. 36.

<sup>61</sup> Unpublished data furnished by Bureau of Employment Security, April 1946.

<sup>62</sup> *Survey of Current Business*, June 1943, p. 31, and subsequent issues up to February 1945 on pp. S-10 or S-11; Bureau of Labor Statistics, *Employment and Payrolls*, mimeographed monthly, February 1946, p. 31.

<sup>63</sup> See, for example, report of proceedings of the War Conference of the Grocery Manufacturers of America in the *N. Y. Herald Tribune*, June 6, 1943.

<sup>64</sup> Among such crop spoilages which were publicized may be included: fresh vegetables in Wisconsin, tomatoes in New Jersey, early peas in the State of Washington, spinach in the South, etc.

<sup>65</sup> Bureau of Labor Statistics, *Canning and Preserving (T-90)*, mimeographed release in series periodically summarizing data on employment, payrolls, hours and earnings, 1945, p. 1.

<sup>66</sup> For example, in 1942, employment in fruit and vegetable canneries rose from 55,638 at the beginning of May to 316,371 at the beginning of October. (*Manpower and Wage Problems in the Seasonal Processing of Perishable Foods*, Food Distribution Administration, mimeographed, April 19, 1943, Exhibit I.)

of key personnel from military service. Restrictive pay scales, enforced by Federal wage controls, kept cannery wages from rising as rapidly as those offered by farmers seeking the same types of labor.<sup>67</sup> The latter restriction was modified in May,<sup>68</sup> but the cultivation of more intensive competition between processors and farm operators for available labor hardly offered an effective solution to the basic problem. From the standpoint of mobilization objectives, the first pressing need was to effect a more thorough utilization of whatever manpower was available for such occupations. This could have been achieved most expeditiously through a Federal program for guiding the movement of seasonal workers among the industries dependent on their labor. The workers could then have been encouraged to follow carefully mapped routes in shifting from one job to the next by assurances of relatively steady employment at reasonable wages; employers could have been assured an adequate supply of labor when needed in return for assuming reasonable wage and employment commitments. Unfortunately, as has already been noted in Chapter VI, Congress itself erected serious barriers to such programs of labor conservation and hence ensured continued and even mounting difficulties for employers requiring mobile labor reserves. Thus, average annual employment in the canning and preserving industry rose by a mere 3 percent in 1944, only to fall below even the 1943 level in 1945.<sup>69</sup>

### *Food Management Policies and Domestic Distribution*

Food shortages which occurred in spite of adequate civilian allocations, and in spite of adequate distribution facilities, constituted a direct reflection on food management policies and on their implementation. Whether the result was to advantage some groups at the expense of others, or to ease supplies unduly for some periods only to have them become compensatorily stringent during intervening weeks, positive measures were necessary to prevent such imbalances from shaking apart the structure of food controls.

67 Compared with 1940, average weekly earnings in canning and preserving establishments were 42 percent larger in 1942 and 65 percent larger in 1943, while the corresponding gains in average monthly farm wages were 71 percent in 1942 and 124 percent in 1943. (*Canning and Preserving* [T-90], January 1945.) Also see Office of Price Administration, "Annual and Monthly Farm Wage Rates and Index Numbers," *OPA Handbook of Basic Economic Data*, revised November 1944, p. 87.

68 According to a directive issued by the Director of the Office of Economic Stabilization, James F. Byrnes, wages paid to processing workers could be raised up to 8 cents an hour above the rates paid to comparable farm labor. (Office of War Information press release, May 11, 1943.)

69 *Canning and Preserving* (T-90), February 1946, p. 28.



Seasonal fluctuations in total food supplies pointed to the inadequacy of storage facilities and controls whereby the pulsating crop production cycle might have been converted into a smoother distributive flow. Thus, a larger proportion of perishable crops might have been withheld for processing and storage rather than permit the heavy toll in wastage which attended feverish efforts to convey harvest floods of perishables to consumers before spoilage set in. Similarly, the release of storageable crops to markets might have been delayed until the supply of more perishable foods had been sopped up. Supplementary quantities of frozen, canned and dried foods might then have been made available so as to bridge over troughs in the supply of the more perishable foods. At any rate, whatever the means employed, effective food management required the establishment and control of seasonal reserves to level out the monthly food supply, as well as larger reserves to guard against fluctuations in total harvests from year to year.

Failure to maintain a fair distribution of foods among the various segments of the civilian population represented an even more serious threat to food mobilization. For the most part, control procedures were limited to "set-aside" and direct purchase orders to drain off the foods allocated to the armed forces and to lend-lease, after which the remainder was permitted to flow to consumers along whatever channels were chosen by individual processors and distributors. As a result of such laxity, marked differentials in supply developed among geographical regions, between urban and rural areas, and along various other undesirable lines of demarcation.

Ironically enough, the areas that were hardest hit by food shortages were the war production centers along the outer fringe of our territorial borders: from Portland, Maine, to Florida along the Atlantic Coast; in Mobile, Pascagoula and Beaumont along the Gulf Coast; in San Diego, San Francisco and Seattle along the Pacific Coast.<sup>70</sup> While less sizeable

70 "...the actual cases of [meat] scarcity, such as the new centers of war production, ... were confined mainly to the "fringes" far from the large meat-producing section—to the East and West coasts, and the Gulf states". (*Report on the Meat Situation*, prepared for the Senate Sub-committee on War Mobilization by the Economic Analysis Section, Livestock and Meats Branch, Food Distribution Administration, August 14, 1943, p. 4.)

Illustrating this problem, Secretary of Agriculture Claude Wickard cited Norfolk, Va. as "one of the most troublesome areas we have had. For a while there were stores that just didn't have anything to feed that population which I think went up about 33 percent in a few months." (*Senate Investigation of Manpower Hearings*, Part 1, p. 84.)

and less clearly defined statistically, urban disadvantages in food supply were nevertheless quite general throughout the country in comparison with rural areas, and were most pronounced in cities located outside the major food-producing regions. In addition, the failure to equalize the incentive to sell in all markets which were served prior to the war caused scarce foods to gravitate to those markets which could be reached with least shipping costs, or in which goods could be distributed most cheaply,<sup>71</sup> or in which the shipper could acquire the most valuable good-will for post-war operations.<sup>72</sup> Finally, one other pervasive cause of inequitable distribution was the understandable tendency on the part of processors, wholesalers, and retailers, each in turn, to save their scarce supplies for those whose past trade had stamped them as favored customers.

Whatever means might have proved necessary, war food authorities should have redirected the flow of food to where it was most needed, grinding down all differentials not justified by war needs, whether inter-regional, between city and country, or between favored and disadvantaged income groups. If an absence of control encouraged undesirable concentrations in the distribution of available supplies, enough control should have been invoked to at least neutralize such tendencies. Unexplained shortages and recognized disparities in distribution threatened to dissipate faith in the efficacy of government controls, and thus to undermine the popular basis for upholding price-fixing and rationing regulations. Nevertheless, a variety of instances may be cited to indicate the continued inadequacy of the measures employed to overcome these troublesome imbalances. That food distribution was still subject to undesirable disparities in respect to such important commodities as butter, beef, lamb and mutton was publicly acknowledged by Mr. Chester Bowles, Administrator of the

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"The geographical areas most affected by shortages have been the coastal cities where congestion has been extremely great because of the war." (S. R. Smith in *Senate Hearings on War Mobilization*, Part 2, galley, p. SO 36.)

<sup>71</sup> See *Food Program for 1944*, p. 43.

<sup>72</sup> "April 13 survey disclosed ... that the area was receiving only about 50% of its needs ... for dry salt meat. Equally serious is the shortage of canned milk, with some areas receiving none and one distributor reporting that he was forced to stop all sales of canned milk, keeping only a minimum supply on hand for children. Distributors reported receiving from ten to fifty percent of their needs.... Other shortages reported were Irish potatoes, syrups, rice, fresh meat and canned meat.... Survey showed that the meat problem was also a price problem. With packers refusing to ship meat in other than less than carload lots, prices were forced up at least one full cent over carload prices, which reduced the margin of profit often to the point of sales price equalling cost price, or even dropping below cost." (Report of a food survey in the Mississippi Delta undertaken at the request of the Food Distribution Administration, *Delta Council News*, Stoneville, Miss., April 28, 1943.)

Office of Price Administration, at the outset of the last year of the war.<sup>73</sup> The discriminatory allocations resulting from the preference shown by food distributors for hotels and restaurants in comparison with other retail outlets were of such significant proportions, even in 1945, that special amendments to institutional user regulations were finally introduced by the Office of Price Administration in February.<sup>74</sup> In the midst of widespread newspaper discussion of the seriousness of unevenness in food distribution,<sup>75</sup> Mr. Arthur Krock reported in the *New York Times* of March 24, 1945 that, according to official estimates, the variation in meat consumption due to uneven distribution ranged from about 90 pounds per capita in large cities like New York to 150-160 pounds per capita in some farm and small-town areas.

These shortcomings of domestic distribution were traceable to a variety of factors. Most important, was the failure to formulate positive objectives and to exercise supervisory controls over the progressive apportionment of supplies at the major levels of the distribution process. Another handicap was imposed by the absence of a unified system of accurate reporting, detailing the volume and types of food supplies available at all major transfer points in the distribution system. Failure to accumulate adequate contingency reserves to protect heavily populated areas against temporary disruptions in the flow of food<sup>76</sup> further weakened our defenses against the sudden shortages which materialized sporadically in various parts of the country.

Our good fortune in escaping the disruptive food crises that might have sprung from these distributive inadequacies during the earlier years of the war<sup>77</sup> certainly offered no warrant for continued exposure to such risks. In the face of the reasonable probabilities that increasing pressures on U. S. food supplies lay ahead, sound management counseled the promptest possible efforts to remedy our lax control over internal food

<sup>73</sup> *Eleventh Quarterly Report to Congress of the Office of Price Administration*, January 8, 1945, U. S. Government Printing Office, pp. 57-8. Also see Mr. Bowles' radio address over the Blue Network, October 19, 1944.

<sup>74</sup> *House Hearings on Agriculture Department Appropriation Bill, 1946*, Part 2, pp. 76-77.

<sup>75</sup> For example, see *N. Y. Times*, March 18, 1945 and *Baltimore Evening Sun*, March 22, 1945.

<sup>76</sup> See statement by S. R. Smith, *Senate Hearings on War Mobilization*, Part 2, galley, p. SO 38.

<sup>77</sup> "Americans in the last few days have undergone the most pronounced food shortage in the modern history of the country. . . . But a clear understanding of the supply situation makes it plain that some of the market flurries of the last few weeks have been due almost entirely to bad distribution." (*Business Week*, March 27, 1943, pp. 15, 17.)

movements, to accumulate strategically distributed food reserves, and to overcome our deplorable ignorance about where our lines of food security were relatively most vulnerable. Oddly enough, however, government measures relating to food distribution in 1944 involved a relaxation of mobilization controls more frequently than an intensification of them, or, to quote the Secretary of Agriculture, "the year has seen a streamlining of control measures, along with the relaxation of many."<sup>78</sup> This easing of controls on distribution<sup>79</sup> may be attributed primarily to the extraordinary increase in domestic food supplies which was effected during 1944, thereby illustrating how readily a retreat from mobilization objectives at one point, marked in this case by the patent failure to maximize allocations for immediate and anticipated overseas requirements, can encourage retreats on other sectors. Incidentally, so headlong was the premature drive to eliminate distribution controls that the last year of the war witnessed a belated effort to rectify some of the earlier imprudence through a net increase in the number of food orders in force.<sup>80</sup>

#### *Distribution as an Integral Component of Food Mobilization*

Distribution policies and measures never were closely geared together with those governing production, procurement, prices and the allocation of related resources into a comprehensive and coherent wartime food management program.

In the planning of agricultural production, more consideration should have been devoted to reducing the consequent burdens on the distribution system, especially in regard to transportation, processing and warehousing. On the other hand, further adjustments were necessary in the organization of distribution if it was to accord with a production program directed toward the modification of traditional cropping patterns. Closer meshing of production and distribution programs would also have provided mutual reinforcement of their respective conversion objectives.<sup>81</sup>

<sup>78</sup> *Report of the Secretary of Agriculture, 1944*, p. 47.

<sup>79</sup> "In fact, out of 121 [food distribution] orders issued since January 1943, only 73 were in effect by late summer of 1944. Many others were relaxed to conform with new conditions." (*Report of the Director of the Office of Distribution, 1944*, p. 3.)

<sup>80</sup> "Sixty-eight [war food distribution] orders were in effect as the [1945] fiscal year began; 78 were in effect at its close." (*Report of the Director of the Office of Marketing Services, 1945*, p. 6.)

<sup>81</sup> Food mobilization efforts were materially retarded by conflicts between production aims and distribution activities. To cite but one example, the Army and the Navy maintained heavy purchases of lettuce and other inessential crops despite the announced intention of food production authorities to discourage such production. (*Senate Investigation of Manpower Hearings*, p. 162.)

One important means of advancing such coordination on a practical level would have been to appoint a full-time representative of the Food Distribution Administration in every agricultural county. Such a "county marketing agent" might have served on the Agricultural War Board, kept in close touch with all local production decisions, insinuated a consideration of distribution factors into the formulation of such policies, reported comprehensively on the condition of all crops, appraised the adequacy of marketing facilities for handling anticipated harvests, and effectuated other distribution policies relating to storage, processing and the control of waste. There were already three to five officials in every rural county whose primary concern was agricultural production, hence the absence of even one official with responsibility for the many-sided problems of distribution was all the more indefensible and inexplicable.

While serving as War Food Administrator, Chester C. Davis emphasized that, "with every military success, the correct management of food becomes more important and difficult."<sup>82</sup> In this review of the process of moving foods from 6 million farms through thousands of processors and wholesalers to 500,000 retail establishments and, in turn, to more than 125 million consumers, substantial evidences have been adduced of serious wastage, inequitable sharing, frequent disjunctures, the under-utilization of resources and of a continuous seepage to the black market. In fairness to the food management performance, it should be noted that equivalent disorders marked the early stages of mobilization of other sectors of the economy as well. With the shortcomings identified, however, the essential need was not to assess blame but to hasten the formulation of a food management program whose vigorous implementation would have overcome the more serious of these inadequacies.

Effective management of the nation's food resources might well have required active government supervision of all major distributive operations instead of the mere servicing of breakdowns. Summarizing British wartime experience in this respect, U. S. Ambassador W. Averell Harriman warned Under-Secretary of Agriculture Paul Appleby in March 1943 that:

Unless there is specific and positive government action to assure that supplies are assembled and distributed to the right place at the right time, all evidence here indicated [the probability of] a generally most undesirable situation from the point of view of conservation of supplies, equitable distribution, nutrition and morale.<sup>83</sup>

<sup>82</sup> Address before the Dairyman's League Co-operative Association's annual meeting, June 17, 1943. (Office of War Information news release, p. 3.)

<sup>83</sup> Communication dated March 29, 1943, made available by Mr. Appleby.

To ensure the distribution of food resources in accordance with relative needs rather than relative profits would have required at least the enunciation of specific distribution objectives and policies within an over-all framework of food policies embracing production, allocation, procurement, prices and rationing. In addition, however, the attainment of such objectives might also have required the granting of broader powers to the government for preventing commercial hoarding, discriminatory apportionment of available supplies, and diversions from legitimate marketing channels at every major stage of distribution.

Mounting difficulties with distribution problems of the kinds discussed above, increasing evidences of the inadequacy of current price controls, and a growing awareness that even heavier burdens lay ahead, led to intensive consideration in Washington during the summer of 1943 of proposals for extending comprehensive controls over food distribution channels by the Federal government.<sup>84</sup> The most widely discussed of these alternatives centered on the device of having the government take over the purchase and resale of a wide array of foodstuffs, especially those which were perishable or scarce. As outlined, these purchases and sales would have involved only bookkeeping and commodity record entries by the government, with the accredited processors and distributors who actually executed such transactions serving as agents of the government.<sup>85</sup> On the other hand, the government's close supervision of all such arrangements was expected to check leakages from legal channels to black markets, to enforce equitable allocation of available supplies regionally and among competitive outlets at successive key stages of distribution, and to ensure conformance with price controls throughout the process. Another advantage claimed was that unavoidable cost increases could have been readily absorbed by the government through resales priced below the cost of acquisition, thereby minimizing the spread of inflationary pressures.

Although such a scheme would have been more costly to the government than alternatives which levied the costs of black markets and rising prices directly against consumers, the net cost to taxpayers may well have proved lower under the proposed arrangement. Moreover, it did hold out the promise of effecting a fuller integration of the food distribution, domestic allocations, rationing and price control programs. Active opposition by the War Food Administration, however, together with a fore-

<sup>84</sup> *Wall Street Journal*, June 24 and June 26, 1943; *N. Y. Times*, July 12 and August 1, 1943; *Washington Post*, August 9, 1943.

<sup>85</sup> In practice, such methods would presumably have borne some similarity to the British program of employing government-licensed buyers and distributors. For example, see *Farming in Wartime Britain*, pp. 16, 17, 21 and 23.

knowledge of Congressional hostility which jeopardized the likelihood of securing necessary appropriations, resulted in abandonment of the plan before any formal presentation of it was made to the public.<sup>86</sup> Nor was any comparable program introduced in later years, despite the persistence and even the intensification of the shortcomings which such controls were designed to mitigate.

## 2. FOOD RATIONING

Rationing had far more powerful potentials as a tool of wartime food management than were ever realized in practice. It was not only a means of ensuring the equitable distribution of commodities that had become scarce. Much more important, its inauguration could have provided a direct instrumentality for stimulating the more rapid conversion of food production, distribution and consumption.

### *The Introduction of Rationing*

The utter absence of any rationing organization, of any personnel experienced in such matters, and even of any preliminary plans for the development of appropriate machinery posed a severe problem for this country at the onset of the war. Little had been learned from the voluntary rationing instituted during World War I, with its "wheatless" and "meatless" days, except that such measures were thoroughly inadequate.<sup>87</sup> Total war, it was soon evident, required far more comprehensive controls.

To grasp the immensity of the task involved, one might note that Great Britain had been actively engaged in preparing food rationing plans, along with other wartime food controls, for almost three years prior to the invasion of Poland.<sup>88</sup> Full instructions, registration forms and ration books had actually been printed and distributed to regional warehouses to await the emergency. Nevertheless, in spite of such admirable advance preparations, the British required four additional months after the declaration of war to get rationing under way.<sup>89</sup>

86 *N. Y. Times*, August 1, 1943, and *Washington Post*, August 9, 1943.

87 "The Food Situation in World War I", *The National Food Situation*, April 1943, p. 27.

88 The Food Defense Plans Department of the Board of Trade was established for these purposes in November 1936. (H. L. Franklin, "British Food Control", *Foreign Agriculture*, December 1939, p. 547.)

89 Initiated on January 8, 1940, with the rationing of sugar, butter, bacon and ham. (Jules Backman, *Rationing and Price Control in Great Britain*, Brookings Institution, 1943, p. 25.)

The rationing experience of this country, in contrast, reflected little credit on those who might have been responsible for preplanning ration controls but great credit, indeed, on Dr. Harold B. Rowe and his associates who were charged with the operating task. Not until January 1942 was any formal action taken by the U. S. government to consider the initiation of food rationing. At that time, the Supply Priorities and Allocations Board decided that the Office of Price Administration should undertake the rationing of sugar as promptly as possible. Within a brief three and one-half months after the authority had been delegated,<sup>90</sup> despite the initial lack of any staff or of any procedural precedents applicable to the United States, the guiding policies had been formulated, the necessary forms and instructions had been printed, and approximately one and one-half million volunteers were engaged in the registration of wholesalers, retailers, industrial users and institutional users, as well as in the issuance of ration books to more than 130 million consumers.<sup>91</sup>

From that time forward, food rationing continued to operate with surprising administrative efficiency, considering the newness of its problems and the enormous scale of its work. Coffee rationing was introduced along lines parallel to those employed in the sugar program. The "blue-stamp" program was organized on a point-rationing basis to control the consumption of more than 200 processed food items, mostly canned fruits and vegetables, on an internally interchangeable basis. Another point-rationing program was designed to cover the distribution of meats, canned fish, edible fats, cheese and canned milk. How enormous were the organizational networks that had to be created in order to service such operations is evident from Table 44 showing that between 9,000 and 40,000 primary distributors and wholesalers, between 450,000 and 750,000 retailers, between 200 and 200,000 industrial users and about 340,000 institutional users were involved in each of the various rationing programs which together controlled the distribution of approximately one-fifth<sup>92</sup> of the total food supplies available to civilians.

90 Statement by Harold B. Rowe, Director of the Food Rationing Division, Office of Price Administration in *Senate Hearings on War Mobilization*, Part 2, galley, p. SO 40.

91 Ration books issued: 131,600,000 copies of War Ration Book I and 126,331,000 copies of War Ration Book II. (Office of War Information news release, May 5, 1943.)

92 Statement by S. R. Smith, Deputy Director of Office of Marketing Services, War Food Administration in *House Hearings on Agriculture Department Appropriation Bill, 1946*, Part 2, p. 85.



TABLE 44  
ESTIMATED NUMBER OF DISTRIBUTORS AND USERS OF RATIONED FOOD PRODUCTS

Type of Distributor or User	Coffee	Sugar	Processed Foods	Meat	Oils Fats &
Primary Distributors ...	1,700 <sup>1</sup>	128	5,000 <sup>2</sup>	7,000 <sup>4</sup>	13,000 <sup>5</sup>
Wholesalers .....	16,000	16,000	10,000 <sup>2</sup>	2,000	27,000
Retailers .....	450,000	450,000	600,000 <sup>3</sup>	500,000	750,000
Institutional users .....	340,000	340,000	340,000	340,000	340,000
Industrial users .....	200 <sup>1</sup>	75,000	50,000	1,400	200,000

<sup>1</sup> Items reported to OPA. All other figures are estimates.

<sup>2</sup> Establishments.

<sup>3</sup> Includes drug stores handling rationed processed foods.

<sup>4</sup> Excluding farm slaughterers.

<sup>5</sup> Excluding farm producers of butter, estimated at 400,000.

Source: Submitted by Dr. Harold B. Rowe, Director, Food Rationing Division, Office of Price Administration, July 16, 1943 in *Senate Hearings on War Mobilization*, Part 2, galley, p. SO 40.

Although the initial responsibility for food rationing had been assigned to the Office of Price Administration, it was not long before the inter-relatedness of rationing problems and of policy decisions respecting food production and distribution led to informal consultative arrangements with the Department of Agriculture. No authoritative definition of the relative functions and authorities of these two agencies was effectuated until mid-February 1943, however, when a directive by Secretary of Agriculture Wickard and an accompanying "memorandum of understanding" were signed.<sup>93</sup> Under this arrangement, the Office of Price Administration was authorized to establish the value of coupons used in the point rationing system and to change such values as supply developments required. The need for rationing, its timing and its extent, on the other hand, were left to the determination of the Department of Agriculture, along with the initiation of rationing differentials among various classes of consumers.<sup>94</sup>

### *Rationing and Food Production*

In view of its impressive performance in surmounting initial organizational difficulties, it was particularly regrettable that the fullness of the contributions to mobilization made by food rationing were limited by policy shortcomings relating not only to the operating means employed

<sup>93</sup> *Agreement as to the Responsibilities of the Department of Agriculture and the Office of Price Administration in the Rationing of Foods*, signed February 12, 1943. *Delegation of Authority to the Office of Price Administration with Respect to Food Rationing*, Food Directive No. 3, issued February 13, 1943 to become effective February 15, 1943.

<sup>94</sup> Office of War Information news release, February 16, 1943.

but, more seriously, to the very objectives sought. Rationing was first introduced in this country in order to cope with the shortages of sugar and coffee caused by the restriction of imports. Thereafter, even the most highly placed food officials persisted in exploiting this ameliorative function to the subordination and outright neglect of its potentials as an active instrument for advancing the mobilization and conversion of food resources.

Considering the indifferent results which had been achieved in the conversion of agricultural production, there was substantial warrant indeed for questioning the failure to harness the direct action possibilities of rationing in this endeavor. Through its control over ration allowances, such a mechanism could have drastically reduced or eliminated the civilian demand for goods whose production was also being discouraged by war food authorities. The resultant adjustments of demand, in accordance with over-all food management objectives, would assuredly have hastened the re-orientation of those producers and distributors who were tempted to delay conversion so long as the gap between production policies and consumption policies safeguarded the profitability of their markets for peacetime specialties. Attention might even have been given to the rationing of feedstuffs to ensure allocations in closer accordance with mobilization objectives.<sup>95</sup>

Instead of an intensification of rationing controls within the framework of an increasingly vigorous and effective food mobilization program, relaxation was dictated in this as in other areas of distribution control during 1944 by the key decision at the point of allocations to increase domestic civilian consumption at the expense of exports. Little alternative remained thereafter in respect to rationing policies except to specify when, how rapidly and for how long ration allowances were to be increased. By the end of March, ration point values had been reduced to zero on all major canned vegetables as well as on lard. During the second quarter, this list was extended by the addition of all meats (except beefsteaks and roasts), canned fish, all frozen fruits and vegetables, and all remaining fats and oils except butter and margarine. Moreover, point values were reduced on beefsteaks and roasts, on all cheeses and on butter. Additional sugar allotments were also made available to industrial users. In general, the third quarter was characterized by a re-imposition of modest restric-

<sup>95</sup> For a brief summary of British practice in this area, see *Farming in Wartime Britain*, pp. 17-22. Incidentally, some observers attributed the strong opposition marshalled against the introduction of subsidies on wheat early in 1944 not only to a desire to prevent any immediate extension of government controls in this area but also to a longer range fear of wheat rationing. (*Business Week*, January 29, 1944, p. 37.)

tions. The most desirable cuts of the top grades of beef, lamb and pork were once more assigned point values, albeit still leaving 70 percent of the civilian meat supply unrationed. Canned fish was also returned to rationing. Finally, the point values were raised on butter, cheese, canned milk and canned fruit. On the other hand, sugar allotments for home canning were increased substantially. Moreover, assurance by the War Food Administration that available and prospective supplies were "ample" resulted in the removal from rationing of all processed vegetables, except canned tomatoes and tomato catsup and chili sauce, all fruit spreads and all but four types of canned juice. The last major stage in the cycle was initiated in December with the restoration of most meats and canned vegetables to rationing, and with further upward adjustments in the point values of other commodities, including butter.<sup>96</sup>

One may conclude that this "holiday" rendered even more improbable the possibility of renewed attempts to expedite the conversion of agricultural production through intensified rationing controls, both because the momentum of past patterns had thus been augmented by an additional year of tacit official acceptance and because the period of relaxation naturally inspired both producers and consumers to expect an early termination of such controls, thereby generating a climate of opinion most unfavorable to their further elaboration.

A thoroughly integrated food management program would also have involved the modification of production planning so as to implement the strengths and neutralize the weaknesses of rationing. Shifts in crop acreage goals could have effected the concentration of shortages in a minimum number of pre-determined commodities. Where rationing seemed desirable, efforts could have been made to prevent the undue dispersion of production areas and thus simplify distribution controls. Another means of easing the pressure on rationing would have involved the careful linking of decisions to restrict some categories of output with the compensatory enlargement of goals for substitute sources of food bulk, calories and other nutrients. Finally, whenever a choice presented itself among alternate crop reductions, fuller consideration should have been given to the fact that rationing could manage most effectively those shortages which involve the passage of commodities through a sharply constricted number of outlets at some point in their movement from farms to retail stores.

Experience demonstrated that a new rationing program should be introduced as soon as possible after the eventual need for it has become

<sup>96</sup> See the chapters on food rationing in the *Ninth, Tenth and Eleventh Quarterly Reports of the Office of Price Administration*, U. S. Government Printing Office, 1944 and 1945.

probable, if diminishing reserves are to be conserved and if the sharpness of impact on the consumer is to be minimized. Before such a program could begin operation, several months were required for the formulation of necessary policies and regulations, and for developing additional organization. Temporizing and delay handicap rationing severely. Yet every food rationing program in the U. S. was launched months later than would have been most desirable.<sup>97</sup> Such lags were due in no small part to the inadequate coordination of production planning and ration controls, for such joint action would in most cases have either averted the threatened deficit or provided ample advance notice of its coming. Even uncertainties are insufficient cause for delay when major commodities are involved, for it is probable that relatively fewer hardships are involved for businessmen and for consumers in extensions of rationing which later circumstances prove to have been avoidable than in the consistently belated introduction of such measures.

### *Rationing and Distribution*

Rationing interacts even more closely with distribution operations than with production. Black market operations, which constituted the major threat to an effective ration program, were themselves born of weaknesses in rationing controls. The reduction of food supplies available to consumers attendant on rationing was a most prolific source of antagonisms and of claims of discrimination. Moreover, it was in the realm of distribution that the greatest burdens of rationing supervision and inspections fell.

Illegal trade channels depended for their supplies on the failure of our food authorities to funnel all new production into the pipelines of the legitimate distribution system and on leakages from such pipelines before supplies reached retail outlets. Of these two sources, the former was by far the more important, for vast as is the food distribution system through which rationed goods flow, seepage to illegal traffic was drastically reduced by the closer enforcement of ration currency regulations.

Although black market operators obtained the greatest part of their wares by draining away farm supplies before they entered the legitimate

<sup>97</sup> "Relations between Department of Agriculture and OPA on food rationing are strained... [Department of Agriculture officials] refused even to talk rationing possibilities with OPA food men a year ago. When the latter first wanted to talk about meat, D. A. men laughed derisively." (*Business Week*, January 9, 1943, p. 7.)

"Chaos such as currently plagues meat supplies would long since have brought federal rationing upon any less complex but equally essential commodity. Washington has been talking tough ever since early fall, but the date of compulsory rationing keeps receding like a mirage." (*Business Week*, February 13, 1943, p. 18.)

distribution system, rationing officials lacked the authority to come to grips with this problem, while distribution officials were unable to plug such loopholes securely. Failure to choke off such diversions weakened certain of our major ration programs, especially that concerned with the control of meat supplies, where informal estimates by food officials placed the ratio being handled on a black market basis at not less than 20 percent of the total supply. Although these difficulties were then cited by ranking food officials as cause for opposing the extension of rationing to a number of other important farm products, on the grounds that enforcement would be impossible, even a cursory review of the history of slaughter controls suggests that shortcomings in this area were traceable in larger measure to official faltering and vacillation than to the inherent insurmountability of the problems faced.

As issued by the Office of Price Administration on October 1, 1942, Meat Restriction Order No. 1 restricted slaughterers to deliveries no greater than in the specified 1941 base period, and also required the registration of all but the very small-scale operators. Upon transfer of administrative responsibility to the War Food Administration, the order was potentially strengthened by extending the registration requirement to all slaughterers. But it was also seriously weakened as a control measure, however, by the fact that the county agricultural war boards generally issued slaughter permits to applicants without any investigation of their written claims.<sup>98</sup> Five months later, the War Food Administration seized on the heavy increase in hog slaughter to suspend all quotas. Subsequent developments were acutely summarized as follows by the House Special Committee to Investigate Food Shortages:

From September 1, 1943 to January 24, 1945, an applicant for a license needed only to show that he had adequate facilities and met sanitary requirements. . . . Under that freedom, many new slaughterers came into the field, and others, who had theretofore been small, became extremely active. This large increase in slaughterers complicated enforcement and provided increased opportunity for hotels, restaurants and night clubs to obtain meat without ration points and above price ceilings. We have testimony that many did.

Further, when the hog glut became serious, the War Food Administrator waived the requirement for farmers to have a permit to slaughter hogs for sale and by May 1944 all regulations had been removed from farmers who could then slaughter anything without any permit. They were free from restrictions on slaughter for sale and this has continued to be true.

<sup>98</sup> *Food Shortages*, p. 13.

It was January 24, 1945 before War Food Order 75 was amended to provide that licenses to slaughter after that date would be issued only when the applicant could show that the issuance would be in the interest of the war effort, but by that time, custom slaughterers had been licensed in large numbers and some retail stores had bought or leased slaughtering premises to butcher their own beef.

In February 1945, War Food Orders 126 and 126.1 were issued, providing that non-federally inspected slaughterers could not collect the subsidy on over 100 percent of the live weight of cattle and calves and not over 50 percent of the live weight of hogs killed during the corresponding period of 1944. However, if a slaughterer was in the black market, this was ineffective. He lost in subsidy 2 cents a pound to slaughter as he pleased, and the testimony before the committee was that he could get from a minimum of 5 cents to a maximum of 20 cents a pound in wholesale black-market channels . . .

Without doubt the permit system as it was operated was a prolific source of black-market meat and drained off good beef which could otherwise have found its way into legitimate trade channels.<sup>99</sup>

There were four major problems to be dealt with in organizing the movement of food supplies from farms to proper distribution channels without serious leakage to the black market—and none of them justified the recurrent moods of pessimism which seemed to afflict responsible officials.<sup>100</sup> First, farmers had to be enabled to distinguish between buyers for legitimate ends and those whose purposes might have been more questionable, and the patriotic reasons for boycotting the latter had to be clearly and persuasively explained. Second, the local agencies for legitimate marketing channels had to be well-enough informed, aggressive enough, and possessed of sufficient facilities and means to ensure the gathering up of all food available for sale, not just of those supplies which promised the greatest profits in handling; otherwise, farmers were justified in selling their produce to any takers. Third, allowance had to be

<sup>99</sup> *Food Shortages*, pp. 13-14.

<sup>100</sup> It may be considered indicative of the burdens of actual administrative responsibility that, although the House Special Committee had urged the strengthening of rationing controls and also of the slaughter permit system (*ibid.*, pp. 14, 16), Clinton P. Anderson, its chairman and later Secretary of Agriculture, was roundly chided less than one year later by the *Washington Post* for his statements on meat controls before the Senate Banking Committee. According to this editorial, Mr. Anderson's testimony "was steeped in a spirit of defeatism that has undoubtedly given comfort to the enemies of OPA. Instead of a rousing appeal for support of the quota system designed to prevent diversion of meat into black market channels, [he] permitted a note of dubiety to color his feeble endorsement of slaughtering quotas. He even suggested abandonment of the struggle against the black marketers if the plan failed to produce results within 90 days." (*Washington Post*, May 5, 1946.)

made for the fact that farmers felt entitled to a somewhat higher price on the proportion of their output to be sold directly for local consumption than on the remainder which moved through successive stages of distribution. Fourth, some basis had to be provided for checking off the acquisitions of legitimate buyers against the known total supply, both to ensure that no supplies had been neglected and to reveal the possible extent of black market operations. Not one of these needs was adequately met during 1943, nor subsequently; yet none of them seems to have been so difficult of solution as to have warranted the prevalent discouragement. On the contrary, there is little basis for supposing that these difficulties would not have yielded very materially indeed to an authoritative campaign undertaken with determination.

The reduction of civilian supplies obviously necessitated a lessened flow through all distributive channels leading to the consumer. But the means of effecting such adjustments were in heated dispute. In the absence of allocations controls at every major stage of distribution, serious supply differentials emerged among regions,<sup>101</sup> between urban and rural areas and among economic levels. This confirmed the British experience that, "simple back-flow of points is not sufficient in itself . . . to assure proper allocation of supplies."<sup>102</sup> Yet many business groups expressed vigorous opposition to any such extension of rationing controls. Another vexing issue concerned the basis to be used in prorating supply reductions among large and small processing and distributing firms. The enforcement of equal percentage cuts among all establishments would have borne most heavily on small businesses closest to the margin of profitability, probably forcing a substantial number into bankruptcy. Progressive cuts, increasing with the size of establishment, were no less vulnerable to powerful criticism. No satisfactory solution of these problems was devised during the early years of the war, with the result that every specific decision was challenged as arbitrary by one side or the other. It was urgent, therefore, that rationing officials either be given authoritative guidance in resolving such issues, or that they be assured authoritative support in themselves formulating and carrying into effect such policies as would have given clear direction to the many individual decisions being made.

101 The single exception to the absence of inter-regional allocations control was in the case of sugar, where "a system of zoning controls the flow of sugar . . . from the refiner on down to the ultimate consumer." (Statement by S. R. Smith in *Senate Hearings on War Mobilization*, Part 2, galley, p. SO 38.)

102 In previously cited communication from U. S. Ambassador W. Averell Harriman to Paul Appleby, dated March 29, 1943.

By withholding action along both of these lines, Congress necessarily assumed substantial responsibility for the related difficulties with which the legislators belabored the Office of Price Administration.

Rationing provided a valuable backbone of control around which food distribution might have been more effectively organized to safeguard the orderly distribution of available supplies. By integrating their supervisory and control efforts with those made in behalf of rationed goods, food distribution officials might well have achieved new levels of success in shutting off supplies from illegal channels and hence easing the shortages which plagued legitimate distributors. At the same time, rationing could have been employed just as effectively to discourage the diversion of distribution resources to inessential foods as to discourage the production of such crops.

### *Rationing and Consumption*

While rationing controls alone could not reorganize the distribution of food supplies so as to maximize the health and working efficiency of our civilian population, their contributions to that end could have been greater than was the case.

Scientific findings reinforce common observation that adults need more food than children, that men need more than women, and that those engaged in heavy work need more than people in less active occupations. Not one of these differentials in physiological needs, however, found recognition in ration allowances. As a result, the superficial equity of allowing each individual an equal share of scarce foods really involved granting more than was required to large numbers, while squeezing others below their minimum needs.<sup>103</sup> Objections were voiced to the organizational complexity of seeking to adjust rations to the precise needs of each individual,<sup>104</sup> but it was unquestionably both feasible and urgent that ration allowances be adjusted to accord with at least the grosser differences in physical needs—for example, reducing allowances to children under ten years of age and granting increases to men in heavy industrial work.

The existing situation might have been rectified either by varying the value of ration currency made available to different categories of con-

103 "While per capita rationing has the virtue of simplicity, it inevitably gives some people more than they need and others not enough." (*Fifth Quarterly Report of the Administrator*, Office of Price Administration, April 30, 1943, p. 15.)

104 R. S. Wilder, "Meeting Nutritional Requirements in Time of War", Address to Annual Meeting of the Massachusetts Medical Society, May 26, 1943. A similar viewpoint was voiced by Dr. Harold B. Rowe in *Senate Hearings on War Mobilization*, Part 2, galley, p. SO 41.



sumers, along the lines of the A, B, and C gasoline allotments, or by providing those who needed larger rations with additional food at their places of work to supplement meals eaten at home. Britain chose the latter course.<sup>105</sup> As a result, more than 96 percent of all British factories employing 250 workers or more maintained in-plant feeding facilities, while fewer than 40 percent of the American plants in that size category were similarly equipped in 1943.<sup>106</sup> But there was a difference between these two programs much more fundamental than their comparative coverage. In Britain, the individual had to surrender ration points whether dining in restaurants or at home. Consequently, the significance of their factory meals program lay in its providing workers with extra rations beyond those available to them from any other source. In this country, on the other hand, the failure to require the surrender of ration points for meals eaten out rendered the in-plant feeding facilities merely a convenient substitute for overcrowded and frequently less accessible commercial eating establishments,<sup>107</sup> instead of serving as a source of larger rations than could otherwise be secured. Thus, although the War Food Administration continued to actively encourage the construction of in-plant feeding facilities in 1944,<sup>108</sup> this was in no real sense a program to help ensure differential rations in accordance with the admitted variation in the food requirements of various sections of the population.

There was undoubtedly much truth in the contention that average civilian rations in the U. S. were generous enough to meet the physiological requirements of virtually all occupational groups, except for a few highly distinctive and numerically minor categories such as loggers, merchant seamen and certain miners. Hence, this argument would continue, inasmuch as special provision had already been made for the latter groups,<sup>109</sup> and inasmuch as outside meals were available to supplement the

105 Jules Backman, *Rationing and Price Control in Great Britain*, p. 32. Also noted by Robert Goodheart, "Wartime Feeding of Industrial Workers", *Annals*, vol. 225, p. 119.

106 Speech to N. Y. City Kiwanis Club by Eugene Casey, Special Assistant to President Roosevelt, May 4, 1943 inserted in Appendix of the *Congressional Record* by Senator W. W. Barbour of N. J., June 7, 1943, p. A3033.

107 Something of the conditions which currently obtained in U. S. war plants may be found in House Committee on the Merchant Marine and Fisheries, *Hearings on In-Plant Feeding in Shipyards and Shipbuilding Plants*, U. S. Government Printing Office, 1943, pp. 2, 5, 11, 19, 27.

108 *House Hearings on Agriculture Department Appropriation Bill*, 1945, pp. 853-4.

109 This action was taken only after extensive discussions by the Interdepartmental Food Advisory Committee at weekly meetings lasting from March 30 to May 4, 1943. Relief for these groups took the form of amendments to Rationing Orders 13 and 16 and

home consumption of those with extraordinary needs, there was no need to consider differential rationing. And yet it was this very indiscriminate generosity of the program that emphasized its weakness as a tool of mobilization. For the consumption objectives of mobilization had necessarily to stress elimination of the wastes attendant on unwarrantedly high as well as undesirably low consumption by individuals. If the basic premise of the foregoing argument against differential rationing was correct—that average food consumption levels were sufficient to meet even the relatively higher requirements of millions of hard-working laborers in war industries—it seems apparent that large quantities of food could have been saved to combat extreme hunger abroad by reducing general domestic consumption levels, and by granting the larger diets only to those whose claims were justified by the physical demands of their jobs or by special physiological needs.

Another problem not directly within the province of rationing responsibilities, and yet closely associated with the effectuation of their objectives, was the inability of many millions of low income recipients to buy the quantities of food needed by their families and made available by rationing. The widespread existence of such deprivation, estimated unofficially to have affected not less than 25 percent of the population in large sections of the country, was certainly inexcusable at a time when few parts of the adult population could properly be considered outside of the direct manpower reserves of the war effort. Nevertheless, the only assistance which was provided to ease this burden was the admirable but modest school lunch program which could supplement the rations of only a small portion of the children of such families.<sup>110</sup> No federal agency even had clear jurisdiction to attempt to cope with the problem. One of the few constructive contributions that was attempted in this area was the introduction of a legislative proposal by Representative Christian A. Herter of Massachusetts which would have authorized the War Food Administration to issue food stamps to increase the food purchasing power of low-income families.<sup>111</sup> Others suggested that special price subsidy programs should be enacted to ensure the availability at minimum cost of such nutritionally rich foods as would be essential to a balanced diet. Remedial

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was justified on the grounds that such individuals were isolated by occupation from the ready availability of such unrationed foods as fresh eggs, fish, fruits and vegetables. (See statement by Harold B. Rowe in *Senate Hearings on War Mobilization*, Part 2, galley, p. SO 41.)

110 As of January 1943, approximately 5 million children were benefitting from such aid. (*House Hearings on Agriculture Department Appropriation Bill, 1944*, p. 1142.)

111 See *Congressional Record*, June 18, 1943, p. 6231.

measures certainly deserved more intensive consideration than was given to them, for no wartime food program could be considered adequate which failed in the initial essential task of providing all families with at least the minimum requirements of healthful consumption.<sup>112</sup>

The foregoing brief review of rationing problems emphasizes anew the shortcomings which were evident in varying degrees in every phase of food management as a result of the absence of a coherent, fully-integrated program of wartime food controls. The inadequate coordination with food distribution contributed to the warped availability of supplies at retail outlets in different parts of the country, and, often, in different parts of the same city; its inadequate coordination with price controls reduced the extent to which the burdens on the latter were eased; and its inadequate adjustment to variant civilian requirements delayed a more equitable and more economical allocation of ration allowances. In short, its loose integration with over-all policy objectives and controls vitiated the potentialities of rationing as a direct, powerful means of further advancing the conversion of production, distribution and consumption in accordance with war urgencies.

112 In this connection, it is interesting to note the contrasting experience and outlook of the British. According to Dr. Russell M. Wilder, "The successful management of foods in Britain has been so convincing of the value of scientific guidance in policies affecting food that British leaders, conservative and liberal alike, expect their government, at the conclusion of the war, to continue present efforts directed at increasing efficiency of distribution, with subsidies, where subsidies are necessary, to insure that the most necessary foods, such as milk and fruit, reach those too poor to buy them." (Wilder, "Quality of the Food Supply and the Need for its Control," *op. cit.*, p. 296.)

## CHAPTER XIII

### PRICE POLICY, INFLATION CONTROL AND MOBILIZATION

THE heated disputes that arose repeatedly over price policies retarded the mobilization of food resources more seriously than is commonly realized. Appropriate price policies were necessary to encourage progress in the directions determined in advance by food production, distribution and consumption policies. But the very heat of these controversies so concentrated the attention of disputants on price considerations alone that the early years of the war, and to a large extent the later years as well, were characterized by efforts to define price policies without first securing agreement on the operating policies which were thus to be implemented.

What was the relative order of essentiality of the multitude of food crops and animal products being grown in the U. S.? How much was needed of each in order to meet foreign and domestic requirements? To what extent had the output of relatively inessential crops to be reduced in order to make possible sufficient production of those needed more urgently? The unformulated answers to such questions constituted the very foundations on which the food price program should have been erected. So long as price policy discussions continued without sound footing in such prior determinations, it was inevitable that the compromises reached would continue to bear no close relationship to the tasks of war mobilization.

The two major problems of wartime price policy were to control the general price level and to convert the peacetime structure of price differentials so as to encourage the conversion of the peacetime economy to emergency needs. Food mobilization and inflation control policies were closely interacting. Both had to be considered if sound policies relating to either were to be forthcoming. To expand and to alter the content of agricultural production would have presented a less serious challenge, at least from the standpoint of farmer motivation, if price offerings had not had to be limited by inflation control considerations. Nor would it have been as difficult to maintain and even to reduce current price levels if we had had no care for the resultant lessening of supplies. It was precisely the mutual compromise of these apparently conflicting objectives, of speeding agricultural mobilization and yet safeguarding inflation controls, that represented the central task of wartime food price policy.

So long as the detailed objectives of food conversion remained undefined, not only was it impossible to design price policies which would have

effectively advanced such efforts, but price discussions were forced by default to focus on inflation control issues alone. The chief consideration in Congressional discussions concerned with raising or supporting the price of a specific commodity was not whether the war effort required a greater or lesser production of it, but simply whether the current price was high enough to cover production costs and leave net returns to growers comparable to those secured by other, perhaps more essentially employed, economic groups. Again and again, shortages of certain foods, including butter and meat, were denounced in newspapers and in Congress, and suggestions were offered for increasing their production through the upward readjustment of price ceilings, without considering that such shortages might have been consciously, though reluctantly, planned in order to conserve our inadequate production resources for more urgently needed crops. One may dispute the production plans made by those thankless government servants who had to take the responsibility for unpopular decisions in order to carry out the legislative decrees of the Congress, but it would have been as unsound to attempt to legislate technically complex food production goals through legislative control over price policies as it would have been to legislate military strategy through legislative control of Army and Navy appropriations.

#### I. PRICES AND ECONOMIC STABILIZATION

The efficacy of food price policies in supporting economic stabilization was determined by the adequacy of financial returns to farmers, processors and distributors relative to their operating costs and risks, and also by the reasonableness of purchase prices to consumers in proportion to their incomes. Because these factors were closely inter-related, special interest groups only delayed the advent of a sound, equitable price program and undermined national unity by insistently pressing their own narrow demands without regard, and even in opposition, to the compensatory adjustments in the returns of other claimants made necessary by the success of the initiating groups. To raise farm prices while freezing retail price ceilings threatened risks as disruptive of effective food management as to roll back consumer prices without safeguarding the producer, and represented measures as evasive of wartime realities as to fix prices at some one point in the production-distribution process without controlling prices at other stages as well. As a matter of fact, sober appraisal of the food price situation demonstrates that the superficial conflicts which were magnified by partisan publicists might have been resolved quite readily without penalizing the patriotism of any of the major groups involved.

*Returns to Farmers*

Before the merits of alternate proposals for stimulating food mobilization without endangering economic stabilization could be appraised, it was necessary to determine at what levels price and income relationships should be stabilized. Each of the groups seeking more favorable treatment premised their claims on the contention that other groups had been differentially advantaged during the preceding years and hence that further dispensations should be granted to this claimant before relationships were finally frozen. Agricultural spokesmen were particularly emphatic and persistent in expressing such sentiments, coupling their grievances with attacks on industrial labor as the special beneficiary of past stabilization measures. Factual analysis, however, provided little support for such allegations.

Viewed broadly, farmers were most generously rewarded for their individually strenuous efforts to expand agricultural production since the war began. One simple index of their gains was provided by a comparison of the prices received by farmers for agricultural products with the prices paid out by them for production expenses, living costs, and for interest and tax payments. As may be seen from Table 45, the level of farm prices

TABLE 45  
CHANGES IN PRICES RECEIVED AND PRICES PAID BY FARMERS, 1940-45  
Index Numbers

Year	Prices Received (1940 = 100)	Prices Paid, Including Interest and Taxes <sup>1</sup> (1940 = 100)	Ratio of Prices Received to Prices Paid Including Interest and Taxes (1940 = 100)	(1910-14 = 100) <sup>2</sup>
1940 .....	100	100	100	80
1941 .....	124	106	118	94
1942 .....	159	120	133	106
1943 .....	192	130	148	119
1944 .....	195	136	144	115
1945 .....	202	139	145	116

<sup>1</sup> Covers prices paid by farmers for commodities used in living as well as production.

<sup>2</sup> This constitutes the "parity ratio."

Source: Bureau of Agricultural Economics, *Agricultural Prices*, mimeographed monthly, April 29, 1946, p. 34. For description of composition of above indexes, see *ibid.*, pp. 27-30.

received almost doubled between 1940 and the fall of 1943, while the index of prices paid out increased by hardly one-third. As a result, the buying power per unit of farm production in 1943 had grown by 48 per cent over the average rate prevailing during 1940. In addition, although agricultural spokesmen had repeatedly professed their goal to be "parity," or a relationship to the rest of the national economy roughly comparable to that enjoyed by agriculture in 1910-1914, the ratio of prices received

by farmers to prices paid out by them continued to rise after reaching that goal in mid-1942, with the 1943 average actually 19 percent above parity. Moreover, while the headlong advance of prices received by farmers was sharply decelerated during the remaining years of the war, the extraordinary advantage derived from the foregoing pattern of adjustments was almost wholly preserved for agriculture at the generous 1943 levels.

Still more direct and striking evidence of the economic benefits reaped by farmers during the war is provided by such a review of net income from agriculture as is presented in Table 46. These data reflect the contri-

TABLE 46  
WARTIME GAINS IN NET INCOME FROM AGRICULTURE, 1940-45 <sup>1</sup>  
Index Numbers (1940 = 100)

Year	Farm laborers' wages	Farm operators' net income	Net income per farm realized by farm operators	Per capita net income of all persons on farms
1940 .....	100	100	100	100
1941 .....	119	138	138	140
1942 .....	156	199	202	214
1943 .....	192	263	270	288
1944 .....	208	277	287	304
1945 .....	219	282	293	323

<sup>1</sup> Includes net income from government payments as well as from agricultural output.

Source: *The Farm Income Situation*, June 1946, pp. 22, 24.

butions not only of the advantageous price relationships already noted, but of the expanded physical volume of farm marketings as well.<sup>1</sup> Annual wages of farm laborers advanced rapidly, reaching 219 percent of their 1940 total in 1945. Even this brisk pace was surpassed by increments in the net income from agriculture (including government payments) of farm operators, whose earnings in 1945 were 282 percent of the level prevailing five years earlier. Computed on a "per farm" basis, thus allowing consideration to a slight reduction in number of farms,<sup>2</sup> the realized net income of farm operators rose to 293 percent of the base year value dur-

<sup>1</sup> The index of physical volume of farm marketings, which excludes production retained by farmers for home consumption but "includes a small part of the interfarm sales of agricultural commodities," rose from 100 in 1940 to 122 in 1943 and to an average of about 129 during 1944 and 1945. (*Agricultural Outlook Charts—1945*, p. 22; Bureau of Agricultural Economics, *The Farm Income Situation*, mimeographed monthly, November 1943, p. 12; January 1945, p. 8; and subsequent 1945 issues including December 1945, p. 5.)

<sup>2</sup> Estimated number of farms (thousands): 1940—6,097; 1941—6,077; 1942—6,025; 1943—5,931; 1944—5,888; 1945—5,877. (*The Farm Income Situation*, June 1946, p. 24.)

ing the period under examination. In measuring the improvement in the economic status of those engaged in agriculture, however, correction should also be made for the estimated reduction in farm population from 30.3 millions in 1940 to 25.2 millions in the last year of the war.<sup>3</sup> Accordingly, it may be noted that the per capita net income of all persons on farms, both from agricultural output and from government payments, rose to 323 percent of its 1940 level in 1945.

These advances far surpassed both in scale and in sustained rate of increase any previously achieved by American agriculture. Farmers had always thought of their earnings during the first World War as the measure of lush prosperity, yet average income per person engaged in agriculture not only rose more rapidly during 1940-43 than during 1916-19, but the level reached in 1943 was already more than 40 percent in excess of the 1919 peak, with further wartime gains still in the offing.<sup>4</sup> It may be noted parenthetically that a comparison of its economic experiences during these two wars also emphasizes agriculture's heavy stake in effective price controls.<sup>5</sup> Prices received by farmers surged upward by some 82 percent during 1916-19, almost equalling the observed rise of 92 percent during 1940-43. On the other hand, the rise in the index of prices paid out by farmers during the latter period was restrained by price control agencies to only about one-half of the comparable advance during the earlier period.<sup>6</sup> One need go no further to discover one of the principal reasons why the annual net income from agriculture increased by 88 percent during 1916-19 as compared with a gain of 144 percent during 1940-43.<sup>7</sup>

The extraordinary proportions of agricultural aggrandizement during the war is even more sharply highlighted by contrast with the gains achieved by the remainder of the economy. The per capita net income of persons not living on farms rose by 74 percent during 1940-43 and by 80 percent during 1940-45, or by not much more than one-third as much as the increases in per capita net income from agriculture and government

<sup>3</sup> *Ibid.*, p. 23.

<sup>4</sup> Average net income per person engaged in agriculture: 1916—\$465; 1919—\$969; 1940—\$537; 1943—\$1,388; 1945—\$1,545 (estimated). (*Agricultural Outlook Charts—1946*, p. 6.)

<sup>5</sup> For further discussion of this point, see Oscar Zaglits, "Inflation and the Farmer," *Agricultural Finance Review*, November 1942, especially pp. 30-33.

<sup>6</sup> *Agricultural Statistics—1946*, pp. 551-2.

<sup>7</sup> Net income from agriculture (millions of dollars): 1916—6,287; 1919—11,809; 1940—6,521; 1943—15,892; 1945—16,831. (*The Farm Income Situation*, June 1946, p. 21.)



payments enjoyed by the farm population.<sup>8</sup> "Parity for agriculture" has been translated into income as well as price ratio objectives. As defined in the Agricultural Adjustment Act for 1938, agriculture's income parity position is to be determined from the same comparison as was presented above, except that each per capita index must first be converted to a 1910-14 base.<sup>9</sup> Although the avowed end in respect to this parity measure, too, had always been to attain a ratio of 100 percent, this limit seems to have been lost sight of, and with it of the ostensibly weighty advantages of the "balance" which its advocates had propagandized interminably—as the ratio climbed to 107 in 1941 and to 133 in 1942. It is true enough, of course, that agriculture's spectacular climb started from a position on the economic scale lower than any comparable sector of the economy. For this reason, it would probably have been undesirable to freeze agriculture's relative price and income positions too early in the war, although wartime economic stabilization is supposed to be much less concerned with redressing old wrongs than with suspending the multilateral struggle among all participants in the national income to enlarge their own particular shares. At any rate, the generous gains which had already accrued to agriculture by the end of 1942 seemed to offer reasonable grounds for curtailing trends toward further disparity. Instead, agriculture itself contributed to the intensification of inflationary pressures through the continued rise in the income parity ratio, which reached 149 in 1943 and 162 in 1945.<sup>10</sup>

Despite widespread assertions to the contrary, rendered more credible through repetition by influential spokesmen,<sup>11</sup> the large majority of

8 Index of per capita net income of non-farm population (1940=100): 1941—118; 1942—145; 1943—174; 1944—183; 1945—180. Index of per capita net income from agriculture and government payments of persons living on farms (1940=100): 1941—140; 1942—216; 1943—289; 1944—304; 1945—324. (*The Farm Income Situation*, June 1946, p. 23.)

9 *Ibid.*, p. 19.

10 Income parity ratio (1910-14=100): 1940=90; 1941=107; 1942=133; 1943=149; 1944=149; 1945=162. (*Ibid.*, p. 23.)

11 By way of illustration, see the July, August and September 1943 issues of the *American Agriculturist*, *National Grange Monthly*, and *Farm Journal*. Also see the statements made by representatives of the American Farm Bureau Federation, National Grange, National Council of Farmer Co-operatives and National Co-operative Milk Producers' Federation before a variety of Congressional Committees, e.g., *Senate Hearings on the Food Supply of the U. S.*, Parts 1-3, 1943; and also House Committee on Banking and Currency, *Hearings on Continuance of Commodity Credit Corporation*, U. S. Government Printing Office, 1943.

farmers had almost from the outset of the war looked askance at efforts to aggravate the inflation of farm product prices. Public opinion studies and trained field observers had reported as early as the late fall of 1941 that satisfaction with the general level of farm prices was prevalent in virtually all sections of the country.<sup>12</sup> In fact, farmers themselves were complaining with significantly growing frequency about the continued rise in the price of foods which they had to purchase.

Although the general level of farm income advanced with giant strides, closer scrutiny of this development reveals a decided raggedness within the ranks which calls attention to what were some of the most vexing issues of agricultural policy. One of these was the lack of close correlation between the magnitude of the profits yielded by various crops and their relative essentiality to the war effort.

Analysis of the changes in production costs and in prices which affected 34 major food commodities during the period between January 1, 1941 and July 1, 1943—as shown in Table 47—emphasized the wide disparity in the incentives which they offered to potential growers. Within this sample, increases in production costs ranged from 15 percent to more than 50 percent; price increases ranged from 46 percent to 388 percent. Because price gains were but infrequently proportioned to mounting costs, the ratio of price increases to cost increases proved to be more than ten times as favorable for some crops as for others. Thus, even the very scale of such differentials was at variance with the economic stabilization objective of preventing excessive gains by some groups at the expense of others.

Earnings differentials were capable of serving as powerful tools for guiding the conversion of agricultural output. During the two and one-half years covered by these data, however, it is notable that the prices received by tobacco growers increased ten times as rapidly as their production costs; celery and asparagus prices rose four times as fast as their production costs; and cotton prices nearly three times as much as costs; on the other hand, eggs and dairy products prices rose less than twice as much as costs, and the prices of chickens and of the remarkably efficient and nutritious carrot barely outpaced their production costs. The non-

<sup>12</sup> See public opinion polls citing farmers' views toward the acceptance of agricultural prices and toward the desirability of curbing further increases in them including American Institute of Public Opinion releases dated Nov. 5, 1941, Dec. 14, 1941, June 10, 1942 and Feb. 14, 1943, as well as those published in *Successful Farming* in the February 1942 and April 1943 issues. These findings were also confirmed by special field studies conducted throughout this same period by the Bureau of Agricultural Economics, but not released to the public.

TABLE 47  
INCREASES IN FARM PRICES AND COSTS FOR SELECTED COMMODITIES, JANUARY 1, 1941-JULY 1, 1943  
Preliminary Estimates

Commodity	Price Increase <sup>1</sup> (%)	Cost Increase <sup>2</sup> (%)	Ratio of Price Increase to Cost Increase (%)	Commodity	Price Increase <sup>1</sup> (%)	Cost Increase <sup>2</sup> (%)	Ratio of Price Increase to Cost Increase (%)
Grapefruit .....	388	31	1250	Lima beans .....	115	34	338
Tobacco .....	383	39	970	Onions .....	150	48	312
Barley .....	116	15	773	Hogs .....	99	32	309
Lemons .....	213	32	665	Cotton .....	102	36	283
Potatoes .....	215	33	652	Snapbeans .....	97	36	270
Rye .....	95	15	633	Green peppers .....	92	35	263
Beets .....	291	46	633	Cucumbers .....	94	37	254
Tomatoes .....	238	39	610	Cottonseed .....	84	36	233
Oranges .....	185	31	597	Lettuce .....	83	41	202
Cauliflower .....	251	46	545	Eggs .....	105	54	194
Wheat .....	74	15	493	Milk (wholesale) ..	79	42	188
Soybeans .....	92	19	483	Butterfat .....	74	42	176
Cabbage .....	172	36	478	Veal calves .....	55	33	166
Celery .....	171	39	438	Beef cattle .....	53	33	160
Spinach .....	174	40	435	Chickens .....	70	53	132
Asparagus .....	222	56	396	Carrots .....	52	50	104
Corn .....	67	20	338	Green peas .....	46	54	85

<sup>1</sup> Adjusted for seasonal variation.

<sup>2</sup> Based on prices paid for production expenses, interest, taxes and hired labor on *specialized farms*.

Source: Unpublished analysis by Division of Research, Office of Price Administration, August 23, 1943 based on Department of Agriculture data.

conformance of this pattern of incentives with the relative essentiality of crops indicates that income differentials among commodities were actively retarding rather than encouraging desired conversion.

Similar maladjustments between financial incentives and the relative essentiality of alternate employments become apparent when the analysis is focussed on actual types of farm specialization. War urgencies counselled a progressive reduction in grain-fed meat animal enterprises in favor of greater emphasis on dairy production, but gains in annual net income were very substantially larger in the former category than in the latter.<sup>13, 14</sup>

One other scale of internal differentiation in the sharing of agricultural returns which was directly relevant to the definition of price policies was that relating to the distribution of farm incomes. The meagerness of returns to small producers imposed two important limitations on the food mobilization effort. First, the operators of small farms, which represented the most under-utilized sector of production capacity, were hardly stimulated to the utmost by the small net returns left to them after meeting their differentially higher costs. Second, the paucity of such net incomes also prevented these small farmers from financing the full expansion and

13 Increases in Annual Net Income by Types of Specialized Farms, 1939-43.

<i>Type of Farm</i>	<i>% Increase</i>
Winter Wheat Farms .....	204
Virginia Fire-Cured Tobacco Farms .....	179
Wheat-Grain Sorghum and Livestock Farms .....	177
Hog-Beef Breeding-Fattening Farms (Corn Belt) .....	176
Hog-Beef Raising Farms (Corn Belt) .....	163
Wheat-Corn Livestock Farms .....	163
Nebraska and Illinois Corn Farms .....	125
Wisconsin Dairy Farms .....	128
Iowa Hog-Dairy Farms .....	117
New York Dairy Farms .....	101
Georgia 2-mule Cotton Farms .....	129
Texas Black-Prairie Cotton Farms .....	112
Mississippi-Delta 2-mule Cotton Farms .....	96

(Office of Price Administration, *Farm Prices, Farm Costs and Farm Production*, February 1943, mimeographed, p. 10.)

14 "We know milk production has not increased as much as the production of many other commodities, which is a very good indication that dairying is not as profitable as some other lines of endeavor...dairying in general has not been as profitable during the past year [1943] as most other lines of production....It would take four hundred to five hundred million dollars...to put the returns to dairy farmers at the place where they would be in line with the returns for most other lines of production." (Testimony of Dr. Howard R. Tolley, Chief of the Bureau of Agricultural Economics in *House Hearings on Agriculture Department Appropriation Bill, 1945*, pp. 150-1.)

conversion of which their land resources were capable.<sup>15</sup> If marginal-cost production were to have been fully mobilized, therefore, price policies should have been modified so as to provide supplemental returns to such producers.

In view of the striking gains that were made in agricultural income during the early years of the war, considerations of inflation control might well have warranted freezing the general level of farm prices by late 1942. It would have been prejudicial to the mobilization effort, however, if such a freeze had been applied indiscriminately to all crops, thereby preventing the internal restructuring of the prices of various commodities in accordance with their essentiality, their efficiency in utilizing production resources and their relative costs of production.

Prices were probably the most effective single means of guiding farm operations, but they, too, should have been supplemented by other aids and inducements if optimum results were to be achieved. Mobilization policies should have dealt not only with the current level of farm prices but also with their duration. Ceilings and price floors should also have been supplemented by special additional rewards to encourage more rapid or fuller adjustments in accordance with urgent war needs. Beyond such income attractions, farmers should have had access to adequate credit and other enabling facilities without which, whatever its size, the pot of gold would necessarily remain beyond the reach of millions of farmers. These needs for added security, greater resources and more effectively designed incentives were so keenly felt by farmers that the failure to satisfy them by direct measures served to intensify the pressure for the indirect and only partial satisfaction obtainable through higher prices.

Four major conclusions emerge from a review of farm prices and net returns during 1940-45:

15 Distribution of Farm-Derived Cash Income Received by Farm Operator Families in 1942.

Distribution		Income Range	Share of Aggregate Income
Highest	20%	\$1815 and over	52.4%
2nd Highest	20%	1220-1814	21.5
3rd Highest	20%	780-1219	14.7
2nd Lowest	20%	380- 779	9.4
Lowest	20%	Under 380	2.0

(Dorothy S. Brady and Margaret J. Hagood, "Income of Farm Families", *The Agricultural Situation*, August 1943, p. 10.)

1. That farmers were rewarded for their intensified production efforts with great generosity;
2. That the majority of farmers did not need nor aggressively demand continued sharp increases in farm prices during the primary formative period of wartime price policy development—roughly 1942 and 1943;
3. That individual farm product prices should have been restructured in their relationship to one another if they were to encourage closer conformance with wartime food requirements;
4. That adequate provision had not been made, nor could it have been effected through existing price-support measures<sup>16</sup> or any other contemplated price policies alone, to meet the deeply-felt needs of farmers for more security in respect to their incomes and assets, for added returns to compensate for marginal production, and for a larger volume and more appropriate forms of credit to permit the full utilization of their resources for war purposes.<sup>17</sup>

### *Returns to Processors and Distributors*

Although it is difficult to secure fully comprehensive and accurate data bearing on the operations, costs and incomes during the emergency of the numerous groups participating in the processing and distribution of agricultural products between farmers and the ultimate consumer, the available evidence suggests that they, too, were advantaged by wartime prosperity.

Farm food product prices rose at approximately double the rate of retail food prices during 1940-43, leaving a proportionately smaller share of the consumer's dollar to be shared among intermediate distributive agents. Moreover, these incremental differentials were hardly altered during the last two years of the war.<sup>18</sup> So substantial was the increase in consumer expenditures for farm-grown foods, however, that the gross returns to distribution undertakings continued to grow at a seemingly reasonable rate. Specifically, Table 48 reveals that while the value of all domestically grown farm food products purchased at retail by civilian consumers rose by one-half during 1940-44, and while their adjusted farm value nearly doubled, the intervening marketing margin, including

16 For details, see address by Robert H. Shields, Solicitor of the War Food Administration and of the Department of Agriculture, *Federal Statutory Provisions Relating to Price Support for Agricultural Commodities*, revised to include statutory changes between August 16 and October 3, 1944, War Food Administration, mimeographed, October 1944.

17 For further discussion, see Chapter IX.

18 Index numbers of retail prices of farm food products (1940=100): 1943-145, 1945-145. Index numbers of prices received by farmers for food products (1940=100): 1943-185; 1945-192. (*The Marketing and Transportation Situation*, December 1945-January 1946, p. 2.)

government subsidies, rose from \$8.6 billion in 1940 to \$10.9 billion in 1944, or by 27 percent.

TABLE 48  
NATIONAL MARKETING BILL FOR FARM FOOD PRODUCTS, 1940-44<sup>1</sup>  
In billions of dollars

Year	Adjusted Farm Value <sup>2</sup>	Retail Value <sup>3</sup>	Marketing Margin <sup>4</sup>	Government Marketing Payments <sup>5</sup>	Marketing Bill, adjusted for government payments (Actual)	(Index No. 1940 = 100)
1940 ...	5.9	14.5	8.6	..	8.6	100
1941 ...	7.4	16.6	9.2	..	9.2	107
1942 ...	9.5	19.6	10.1	..	10.1	117
1943 ...	11.2	21.5	10.3	0.4	10.7	124
1944 ...	11.5	21.7	10.2	0.7	10.9	127

<sup>1</sup> Total charges for marketing from sale by farm producers to purchase at retail by civilian consumers, farm value of equivalent produce, and estimated retail value.

<sup>2</sup> Adjusted to eliminate imputed value of non-food by-products. Also adjusted to eliminate income from products not purchased by domestic civilian consumers. Note: Adjusted farm value series does not include Government payments to producers such as benefit payments, soil conservation, feed subsidies, etc.

<sup>3</sup> Derived by dividing farm value of each food commodity group by farmer's share and totalling results over all groups.

<sup>4</sup> Before adjustment for government marketing payments.

<sup>5</sup> Based on reports by Commodity Credit Corporation and Defense Supplies Corp.

Source: *The Marketing and Transportation Situation*, Dec. 1945-Jan. 1946, p. 5.

In the absence of authoritative estimates of net income earned in food distribution channels, several less encompassing indices may be adduced to demonstrate that such services were at least moderately well rewarded during the period of hostilities. Labor costs constituted the largest element of distributive expenses, yet the Bureau of Agricultural Economics has found that the relationship during 1941-44 between the national food marketing bill and the total payrolls of food marketing agencies which could be allocated to farm food products "conformed almost exactly to the relationship established by the 12 earlier years . . . an increase of \$1.00 in the food marketing bill [being] associated [with] an increase of 59 cents in marketing payrolls."<sup>19</sup> Rents loomed next in importance after wages and salaries, especially in the case of wholesalers and retailers. In this connection, distributors were the beneficiaries of the effective controls instituted by the Office of Price Administration, for rentals are generally recognized to have been more nearly immobilized than any other category of commodity prices.

Other evidences of improvement in the economic well-being of food distribution employments may be cited. A study prepared by the Division

<sup>19</sup> *The Marketing and Transportation Situation*, December 1945-January 1946, pp. 1, 12, 14.

of Research in the Office of Price Administration indicated that the profits of wholesale food grocers in 1942 were 200 percent in excess of those earned in 1939, although the dollar value of their sales had increased only 43 percent during that same period. This same source called attention to the fact that net returns to wholesale grocers were actually averaging 25-30 percent of their invested capital during 1943.<sup>20</sup> While of less spectacular proportions, a general picture of comparative wartime prosperity may also be derived from analysis of the financial statements of the 54 companies selected by the Bureau of Agricultural Economics to provide a sample of profit trends among corporations engaged in food processing and distribution. Dividing this array into 6 groups, composed of 12 meat packers, 5 fruit and vegetable canners, 8 baking companies, 10 grain milling companies, 11 dairy products companies and 8 food chains, average wartime profits exceeded 1940 levels for all groups except the latter, and the extent of each group's relative wartime gain varied inversely with its rank in 1940. Thus, the rate of operating profits on investment, after Federal taxes, which came to 5.0 percent and 6.3 percent, respectively, in 1940 for the meat packing and fruit and vegetable canning groups, averaged one-half and one-third greater during 1941-44. For the baking, grain milling and dairy products groups, whose profit rates in 1940 were 7.2 percent, 8.3 percent and 8.4 percent, respectively, the average rates prevailing during 1941-44 were higher by one-fourth, by one-seventh and by one-eighth.<sup>21</sup> Only in the case of the food chains, whose group profit rate of 9.8 percent in 1940 exceeded even the highest 1941-44 average rates achieved by the other groups, did wartime profits decline slightly—and this seems to have been attributable to a partial shift away from chain retail outlets,<sup>22</sup> rather than to a general reduction in the profitability of food retailing. In respect to this latter point, it may be added that, according to internal revenue data, the net profits before Federal taxes of corporations operating retail food stores increased by 97 percent between 1939 and 1942, and by one-third again between 1942 and

20 Summarized in *The Brewery Worker*, September 15, 1943, p. 8.

21 *Agricultural Outlook Charts*—1946, p. 21.

22 Such shifts away from chain retail outlets, and particularly away from supermarkets, were reported in *The Journal of Commerce*, July 14, 1943 as well as in *The Marketing and Transportation Situation*, September-October 1943, p. 19. Also note estimates of the Department of Commerce that the percentage of the combined sales of chains and independents accounted for by the latter in the "grocery and combined food stores" category had risen after adjustment for seasonal variation from a low of 60.3 percent in the third quarter of 1941 to 67.7 percent by the second quarter of 1943. (*House Hearings on Continuance of Commodity Credit Corporation*, p. 570.)



1944.<sup>23</sup> Similar conclusions emerge from a review of Dun and Bradstreet reports on business failures: the number of such failures declining sharply and steadily throughout 1941-45 among retailers of food and liquor as well as among wholesalers of food and farm products and among manufacturers of food and kindred products.<sup>24</sup>

In short, there was no evidence of such economic pressure on distributors and processors as a whole as would have justified proposing a general increase in price levels so as to expand the net margins of these groups. At the same time, however, some internal adjustments in price differentials and in price controls were necessary to correct developments which were impeding the effective management and distribution of our civilian food supply.

Concerned as it is with the very ganglia of our economic system, price control was continuously in danger of breaking down under the tremendous complexity and extensiveness of its responsibilities. Administrative considerations certainly counseled the simplification of controls. Yet, with the supply of most goods far short of aggregate demand, actual experience demonstrated that the more skeletonized the structure of price ceilings and allocations controls<sup>25</sup> the less effective was the resultant control of distribution patterns and charges. So long as price controls were unaccompanied by reliable grade labeling, average retail prices tended to increase, bespeaking an unwarranted upward readjustment of merchandise grades by sellers at some stage in the distribution process.<sup>26</sup> The zones of

23 U. S. Bureau of Internal Revenue, *Statistics of Income for 1939*, Part 2, U. S. Government Printing Office, 1942, pp. 10-11; *Statistics of Income for 1942*, Part 2, U. S. Government Printing Office, 1945, pp. 88-89; and *Statistics of Income for 1944*, Part 2, Preliminary Report, U. S. Government Printing Office, 1947, pp. 6-7.

24 Number of business failures reported by *Dun's Statistical Review* for the first six months of each year:

Manufacturers of food and kindred products: 1941—196; 1942—189; 1943—51; 1944—18; 1945—7.

Wholesalers of food and farm products: 1941—239; 1942—174; 1943—60; 1944—23; 1945—9.

Retailers of food and liquor: 1941—1,346; 1942—1,121; 1943—360; 1944—67; 1945—30. (*The Marketing and Transportation Situation*, October 1944, p. 17; October 1945, p. 18.)

25 How sporadic, tenuous and unintegrated was the current structure of food price ceilings was evident from even the most cursory review of *Maximum Prices of Agricultural Commodities and Their Products*, compiled by Margaret F. Cannon, Bureau of Agricultural Economics, mimeographed, April 1943.

26 The Office of Economic Stabilization issued an order requiring the grade labeling of meats on August 5, 1943. Its promulgation involved recognition of the fact that the

discretion permitted to distributors in the selection of their outlets tended to distort pre-war patterns of sale in favor of markets which either yielded greater financial returns by requiring lesser outlays for transportation and handling charges, or which yielded greater benefits in the form of less precise grade evaluation or, at any rate, in the form of good-will for future business.<sup>27</sup> Attention has already been directed to some of the consequences of such changed distribution patterns, including the inequitable apportionment of supplies among geographical regions and between urban and rural areas, and including, also, the resultant disadvantage suffered by smaller-scale processors and distributors relative to their more powerful competitors. Effective defense against inflationary threats thus required a more cohesive structure of price ceilings than ever did emerge, covering each of the commercially significant grade levels of each commodity and stretching as continuously as possible from each distributive level to the next from the producers at one end to the consumers at the other.

Our long habituation to the guidance of economic activities by price differentials means that, even during war, whenever verbal exhortations from the government run counter to existing price relationships, the latter tend to be the more influential. Having inherited a peacetime structure of such differentials in distribution as well as in production, it was possible to fully effectuate food management objectives only by supplementing our price-freezing defenses against inflation with new, positive wartime policies utilizing the weapon of changed internal price relationships to stimulate the further mobilization and conversion of distribution resources in accordance with a coherent national food strategy.

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sale of meats at unwarrantedly high grades could increase their retail value by more than one-third. The existence of the same temptation among distributors of canned goods was recognized by the trade journal, *The Canner*, in its issue of October 30, 1943, when it noted the tendency of canners to sell "standards" at "fancy" prices.

<sup>27</sup> The danger of cumulating the harmful effects of initially modest increments added to authorized price ceilings by one stratagem or another was evident from the sober finding reported to the Congress by the Federal Trade Commission's 1943 report on distribution, "Pyramiding of distribution charges by a number of middlemen taking customary percentage margins on an advancing market may multiply customary distribution charges several times in terms of dollars and cents. When this occurs, the pyramided margins may inflate prices to the point where channels of distribution are obstructed and the purpose of distribution is defeated because consumers are either financially unable or unwilling to pay the inflated prices." (Federal Trade Commission, *Methods and Costs of Distribution*, Part 1: Important Food Products, November 11, 1943, p. ii.)

*Food Costs and Consumer Incomes*

In essence, the effectuation of economic stabilization objectives required that the returns of the various working groups composing the economy remain virtually unchanged relative to one another. Any material deviation from such established patterns could be expected to assert itself as a differential increase in the costs to be met by others among these groups, and hence to generate a renewed competitive scramble for income adjustments. Internal frictions of this order had already dissipated productive energies and undermined our national unity of purpose through strikes, mutual recriminations, and outright resistance to government programs. Only one exception to such stabilization of general income levels was justified by war urgencies, the expansion of incomes which were too low to enable the wage-earner to maintain his working efficiency and the health of his family. Yet such claims were among the least in evidence during the long series of conflicts that studded the course of economic stabilization efforts.

In view of the widespread concern at the time about the possibility of mounting pressure against economic stabilization measures by urban labor, it is noteworthy that the immoderate advances permitted to agriculture during the first half of the war period clearly served to accentuate rather than to ease this threat. Attention has already been directed to the fact that during the war the per capita annual earnings of persons not living on farms rose little more than one-third as rapidly as the per capita average for farm residents. In addition, however, the real value of the increment in non-agricultural earnings was materially reduced by the rapid increase in the retail price of farm food products. Indeed, as shown in Table 49, the 45 percent rise in the Bureau of Agricultural Economics' index of the retail price of farm food products between 1940 and 1943 exactly paralleled the 45 percent rise in the average hourly earnings of factory workers, the group commonly considered to represent the most advantaged sector of urban labor. It is true that the index of average wages per industrial worker rose by 70 percent between 1940 and 1943, the gain in hourly rates having been supplemented primarily by a general increase in the hours worked per week. However, even this sizeable gain was overshadowed by a rise during the same period of 77 percent in average food expenditures per capita, reflecting the heavier food requirements of war workers and their increased dependence on prepared meals,<sup>28</sup> as well as the dominant influence of higher prices.

<sup>28</sup> The Bureau of Agricultural Economics reports that part of the increase in actual food expenditures reflected "shifts to purchases of foods involving the expense of additional marketing services, such as prepared meals." (*Agricultural Outlook Charts—1945*, p. 17.)

TABLE 49  
WARTIME CHANGES IN INDUSTRIAL LABOR INCOME, FOOD PRICES AND  
FOOD EXPENDITURES, 1940-45  
Index numbers (1940 = 100)

Year	Average hourly earnings of factory workers <sup>1</sup>	Wage income per employed industrial worker <sup>2</sup>	Retail price of farm food products	Average food expenditures per capita
1940 .....	100	100	100	100
1941 .....	110	117	110	116
1942 .....	129	145	129	148
1943 .....	145	170	145	177
1944 .....	154	182	142	194
1945 .....	155	176	145	207

<sup>1</sup> Based largely on Bureau of Labor Statistics data.

<sup>2</sup> Annual earnings of factory, railroad and mining workers divided by average employment.

Source: *The Farm Income Situation*, June 1946, p. 24; *The Marketing and Transportation Situation*, August 1946, pp. 24-5; *Agricultural Outlook Charts—1946*, pp. 6, 7, 18.

Efforts were made frequently to justify the drive for higher food prices on the grounds that food costs represented so small a proportion of total consumer expenditures that further increases in such prices would have little effect on the cost of living. A variety of facts attested to the insupportability of such claims, however. Outlays for food actually constituted the largest category by far among consumer expenditures, equaling more than double the payments made for housing.<sup>29</sup> During the war, food purchases accounted for an increasing share of total consumer expenditures for goods and services, rising from 25 percent in 1940 to 32 percent in 1943.<sup>30</sup> Moreover, analysis of the causes of the continued advance in the cost of living between September 1942 and March 1943 revealed that higher food prices contributed 83.9 percent of the net gain.<sup>31</sup> It would thus have been more correct to assert that in no other major category of consumer expenditure would a price increase have produced a more severe impact on the cost of living. And, as a matter of fact, this

<sup>29</sup> Food and beverages accounted for a substantially greater share of consumer expenditures during 1941-43 than clothing and housing, the two next largest categories, combined. (*Survey of Current Business*, September 1943, p. 5.) Similarly, it was estimated by the Office of Price Administration in early 1945 that food accounts for 40 percent of living costs, with rent and clothing accounting for 17 percent and 13 percent respectively. (Office of Price Administration, *Renewal of the Stabilization Extension Act*, a reprint of charts and facts submitted by Administrator Chester Bowles in hearings before the House and Senate Committees on Banking and Currency in March 1945.)

<sup>30</sup> *Agricultural Outlook Charts—1946*, p. 18.

<sup>31</sup> *House Hearings on Continuance of Commodity Credit Corporation*, Table 20, p. 566.

was the most frequently cited cause in attempts to justify labor's demands for the relaxation of wage controls.<sup>32</sup>

Non-agricultural groups other than industrial workers were even more seriously burdened by the continued advance in living costs. Civilian employees of the Federal, state and local governments together with the recipients of public assistance and government pensions totalled approximately 8.4 millions, all of them dependent on relatively fixed incomes. An additional 5.6 million veterans of past wars and dependents of those serving in our armed forces also were either wholly or partly dependent on fixed government payments.<sup>33</sup> Store clerks, office workers, salesmen, the employees of public utility and transportation industries and others who received some increases in earnings but less than enough to offset gains in the cost of living were estimated to total approximately 10 millions. Finally, even in the midst of the greatest employment and income boom in U. S. history, 6 million workers were currently receiving wages of less than 40 cents per hour, with millions more receiving only slightly higher returns.<sup>34</sup>

Dr. Richard V. Gilbert, Economic Adviser of the Office of Price Administration, estimated that only 18.5 million of the 43.5 million workers in non-agricultural employments secured increases in earnings in excess of the advances in the cost of living.<sup>35</sup> To the remainder, the shortcomings of price control meant a variety of discomforts and hardships, ranging from the reduction of accumulated savings to the adoption of cheaper but less healthful consumption patterns.<sup>36</sup> Even these estimates tended to be

32 See, for example, the comprehensive report *Living Costs in World War II, 1941-44*, dated June 1944, and prepared by President Phillip Murray and Vice-President R. J. Thomas of the Congress of Industrial Organizations to support its case for modification of the "Little Steel Formula" for wage control used by the National War Labor Board.

33 *House Hearings on Continuance of Commodity Credit Corporation*, Table 21, p. 566.

34 Estimated by the Wages and Hours Division, Department of Labor, October 1943.

35 *House Hearings on Continuance of Commodity Credit Corp.*, pp. 567, 581.

36 "The lower the income the higher the relative food cost. Negro families in urban areas commonly spend 50 to 60 percent of their budgets on food purchases, and in southern areas, among Negro sharecroppers and farm hands, even their inadequate, unbalanced food consumption accounts for 80 percent or more of their earnings.... To low-income Negro families, to the millions of them, inflation does not mean merely a reduction of savings, in fact it does not mean simply higher prices as such; above all, it means less food on the table. When the cost of living goes up, it means less milk for the children—and they have all too little now." (Statement by Dr. Mary McLeod Bethune, Director of the National Council of Negro Women, Senate Committee on Banking and Currency, *Hearings to Continue the Commodity Credit Corporation*, U. S. Government Printing Office, 1943, p. 431.)

relatively optimistic in view of the apparent fact that the Bureau of Labor Statistics' index of the cost of living failed to fully reflect the extent of price increases in war centers and in poorer neighborhoods, the deterioration of quality levels, and the disappearance of customary cheaper grades of various consumer goods which forced the acceptance of more costly substitutes.<sup>37</sup>

### *The Threat to Economic Stabilization*

Every retreat from stabilized price and income relationships, no matter how slight, only quickened the sense of urgency that each economic group felt about the upward readjustment of its own earnings. Given the foregoing evidences of the importance of food costs in consumer budgets, and of the continuously mounting pressure which such costs exerted against controlled income levels, it is apparent that the inadequacies of food price restraints threatened to intensify the centrifugal forces already tending to disrupt economic stabilization achievements.

Inasmuch as the peak of the inflationary crisis still lay in the future, 1943 was no time to engage in bitter partisan recriminations over which groups were to blame for the numerous problems that had already beset economic stabilization efforts. Essentially, the root cause of the major difficulties was the necessarily hurried effort to convert an enormously complex peacetime economy into a very different organism for conducting total warfare. Resultant disjunctures constituted one of the fundamental categories of war cost and hence could have been equitably absorbed only in the same manner as all of the other direct costs of war—by the Federal government. Inability or unwillingness to recognize this truism and to act accordingly generated much competitive jockeying among economic groups to escape what would in truth have been an unfair burden for any of them to be saddled with.

President Roosevelt repeatedly and strongly affirmed the principle of re-establishing a fair relationship between food costs and consumer in-

<sup>37</sup> The history of the controversy about the Bureau of Labor Statistics' index of the cost of living between the summer of 1944 and the fall of 1944 was summarized by Mr. William H. Davis, Chairman of the National War Labor Board, in his official report to the President dated November 10, 1944. Among the array of reports which trailed in its wake may be noted the following: Public members of the National War Labor Board, *Report to the President on the Relationship of Wages to the Cost of Living, and the Changes Which Have Occurred Under the Economic Stabilization Policy*, mimeographed, February 12, 1945; American Federation of Labor members of the National War Labor Board, *Comments on the Public Members' Report*, mimeographed, March 2, 1945; and Congress of Industrial Organizations members of the National War Labor Board, *Report to the President on the Relationship of Wages to Consumer Prices and Cost of Living*, mimeographed, March 7, 1945.

comes.<sup>38</sup> He also called attention to the dominant role played by mounting retail food prices in stimulating inflationary pressures. Accordingly, but three possible courses of remedial action presented themselves. Either retail food prices had to be reduced to the levels contemplated in the Little Steel formula, or at any rate to the levels prescribed in the Price Stabilization Act of October 2, 1942;<sup>39</sup> or the restraint of wage and salary levels had to be relaxed sufficiently to make possible the establishment of a new level of equitable relationship between food costs and consumer incomes; or, finally, simultaneous readjustments had to be effected in bringing these two factors into more equitable alignment.

Two kinds of subsidies were utilized by the Federal government in order to ease the inflationary pressures affecting retail food costs: payments to processors and distributors, and direct payments to producers. The former were initiated in May 1943 to effect a rollback in retail prices without forcing corresponding reductions in prices received by farmers. Processors of butter, beef, pork and lamb products were the major recipients of such subsidies, with smaller sums going to the processors of bread and cereal products, sugar, and fruits and vegetables.<sup>40</sup> Direct payments to farmers were introduced in order to absorb certain extraordinary increases in their costs of production which would otherwise have resulted either in forcing further advances in retail prices or in discouraging the production of needed farm products. Thus, in the case of the major program of such producer subsidies, dairy farmers began receiving payments from the War Food Administration during the last quarter of 1943 to compensate for the rise in feed costs after September 1942.<sup>41</sup>

The scale and effects of these subsidy payments are best indicated by reference to the Bureau of Agricultural Economics' "market basket," whose cost is determined by weighting the current prices of farm food products in accordance with the average quantities of these various com-

38 One of his major statements on this issue was the latter half of his "food message" to Congress on November 1, 1943. (*Congressional Record*, November 1, 1943, pp. 9061-69.)

39 In an effort to prevent any further widening of the already serious gap between food costs and the per capita income of non-agricultural employees, this Act directed that the cost of living be stabilized as thoroughly as possible at the level obtaining on September 15, 1942. (*Ibid.*, p. 9065.)

40 Amount of subsidy per commodity unit, according to information released by Office of Economic Stabilization: butter—5 cents per lb.; cheese—4 cents per lb.; milk—1 cent per quart; meat—3 cents per lb.; bread—1 cent per loaf; sugar—1 cent per lb.; vegetables—3.5 cents per No. 2 can; potatoes—1 cent per lb. (*Congressional Record*, November 18, 1943, p. 9802.)

41 For a summary of the dairy feed subsidy program, see *House Hearings on Agriculture Department Appropriation Bill, 1945*, p. 767.

modities which were purchased annually during 1935-39 by a family of three average consumers. As shown in Table 50, the average retail price of the basket rose steadily from \$317 in 1940 to \$347 in 1941 and to \$407 in 1942, before entering upon an even more abrupt rise early in 1943 which carried the price from \$440 in January to \$484 by May. Then, largely as a result of government payments to producers, and even heavier payments to processors, this price was reduced to \$451 by August and remained within reasonably close range of that level until the spring of 1945.<sup>42</sup> So sharp a reversal of the previous trend in retail food costs represented a substantial accomplishment, even though the total reduction effected represented only about one-half of what would have been necessary to attain the original and repeatedly avowed objective of the program, i.e., returning food costs to September 1942 levels.<sup>43</sup>

Closer scrutiny of these data permits some observations concerning the relationship between changes in the scale of subsidies and adjustments in the retail cost of the market basket. In December 1943, as compared with the preceding May, producer and marketing subsidies together had risen by \$15 but the response to these early applications had been reasonably gratifying, inasmuch as the retail cost of the market basket had declined by \$32, or by approximately twice the increment in government payments. In view of the continued pervasive and powerful upward pressure on prices and costs throughout the economy, however, which only a strongly buttressed and carefully integrated system of curbs, cushions and depressants could possibly have been expected to contain, such extraordinarily generous returns on an inadequately reinforced subsidy program could not, of course, be maintained. Comparison of annual averages for 1944 with those for 1943 reveals that while producer and marketing subsidies increased by \$13, the retail cost of the market basket declined by only \$7. Continuing this diminuendo, a further increase in subsidies of \$7 between 1944 and 1945 failed to prevent an actual increase of \$8 in the market basket's retail value.

Brief attention may also be given to the differential direct returns associated with producer and marketing subsidies during the period under examination, bearing in mind, however, that these indicate only one part of the economic benefits contributed by such payments. Comparing these data for December 1943 and for May of the same year discloses that an increase of \$11 in marketing subsidies was accompanied by a decrease in

<sup>42</sup> For 1943 monthly data, see *Agricultural Outlook Charts—1945*, p. 16.

<sup>43</sup> For example, see President Roosevelt's "food message to Congress," *Congressional Record*, November 1, 1943, p. 9066; also see *The Marketing and Transportation Situation*, September-October 1943, p. 15.



marketing charges (excluding such payments) of \$36, whereas, despite an increase of \$4 in producer subsidies, farm receipts from the market basket actually increased by \$4 even without counting these additional subsidies. Between 1943 and 1944, annual averages show that marketing subsidies rose by \$7 while marketing receipts excluding government payments declined by \$8; but farm receipts from the market basket exclusive of government payments rose by another dollar although producer subsidies had increased by \$6. Direct returns from subsidies reached their lowest wartime level in 1945, when a \$4 increase in marketing subsidies as compared with the preceding year was accompanied by only a \$2 reduction in marketing charges excluding government payments, and when even a further increase of \$3 in government payments to producers failed to prevent an increase of \$10 in farm receipts from the market basket exclusive of these subsidies. Thus, whatever may have been their indirect achievements in forestalling even greater increases in food costs, it may be observed that wartime food subsidy payments to producers and to distribution and processing agencies did offer significant though declining direct benefits, and also that the lesser effectiveness of agricultural price controls caused the direct rewards of marketing subsidies to overshadow those associated with producer subsidies.

TABLE 50  
THE MARKET BASKET <sup>1</sup>—RETAIL COST, GOVERNMENT PAYMENTS, AND PRODUCTION AND MARKETING RECEIPTS, 1940-45  
In dollars

Year	Retail cost <sup>2</sup>	Govt. payments to producers <sup>3</sup>	Govt. marketing payments, less marketing taxes <sup>4</sup>	Farm receipts, excluding govt. payments <sup>5</sup>	Marketing receipts, excluding govt. payments	Total receipts from production and marketing
1940 ...	317	..	..	128	189	317
1941 ...	347	..	..	154	193	347
1942 ...	407	..	..	196	211	407
1943 ...	458	2	5	236	222	465
1944 ...	451	8	12	237	214	471
1945 ...	459	11	16	248	211	486

<sup>1</sup> Market basket contains average annual purchases of farm food products by a family of three average consumers during 1935-39.

<sup>2</sup> Calculated from retail food prices collected by the Bureau of Agricultural Economics and the Bureau of Labor Statistics.

<sup>3</sup> Government payments to farmers for equivalent quantities of farm produce excluding benefit, conservation and parity payments.

<sup>4</sup> Government payments to marketing agencies minus processor taxes.

<sup>5</sup> Payments to farmers for equivalent quantities of farm produce minus imputed value of by-products obtained by processing.

Source: *Agricultural Outlook Charts—1946*, p. 17 and *The Marketing and Transportation Situation*, February 1946, pp. 16-17.

Subsidies were capable of, and actually did make, major contributions to the economic stabilization program, but they could never have been more than auxiliary instruments to help effectuate and then to ease the back-pressure against vigorous price controls. It would have been extremely costly, and essentially futile from the standpoint of combating inflation, to project an expanding program of subsidies to offset whatever further price advances might result from the continuance of admittedly inadequate price controls. On the other hand, the 1943 experience indicated that once strong and pervasive price controls had been established, subsidies could help to achieve a sound new balance among the major contending groups without initiating new trains of interacting price adjustments, and could also help to extend this balance progressively to the farther reaches of the economy.<sup>44</sup> It has been noted that the subsidies paid out during 1943 were not sufficient to roll retail food prices all the way back to the levels which prevailed in September 1942, and hence could have been expected only to diminish rather than to fully invalidate labor's claims for wage increases. But even this solid progress toward establishment of a new stable equilibrium was jeopardized by continuing weaknesses in the barriers against renewed price rises.<sup>45</sup>

44 Although considerable efforts were made to persuade Congress during the fall of 1943 that an overwhelming proportion of farmers were hostile to the subsidy program, a contemporary survey by the American Institute of Public Opinion contested such allegations. Dr. George Gallup, director of the Institute, reported that only about one-third of the farmers interviewed appeared to have some understanding of what subsidies are and that, "about as many favor the food subsidy program as oppose it." He also reported that while ignorance was similarly widespread among the non-farm population, opinion was divided "2 to 1 in favor of subsidies." (*Washington Post*, December 7, 1943.)

45 For example, between 1944 and 1945 the retail cost of the market basket rose by \$8.51. But the cost of its poultry and egg and of its fruit and vegetable components, which together secured only one percent of the total producer and marketing subsidies paid out, rose by \$9.17—to be offset partly by a decrease in the cost of the meat products component of the basket. Incidentally, it may be of interest to note that one cannot easily deduce whatever principles may have dominated official determinations regarding which hardship cases were to be relieved through price ceiling advances, and which through new or added subsidies. During both 1944 and 1945 almost one-half of the total producer and marketing subsidies paid out went to dairy products, about one-third to meat products, one-tenth to bakery products, and the remainder to fruits and vegetables and to miscellaneous foodstuffs, including sugar and vegetable oils. Computed as a percentage of the total retail cost of these market basket components, these subsidies ranged in 1945 from 13 percent in the case of dairy products and 10 percent in the case of meat products to 5 percent for bakery products, less than 3 percent for the miscellaneous group, one percent for fruits and vegetables and zero percent for poultry and eggs. (*The Marketing and Transportation Situation*, February 1945, p. 12; February 1946, p. 17.)

The remarkable gains achieved during 1944 in the direction of stabilizing food prices were the joint product of more vigorous price controls as well as of the subsidy program, with the former seeking to prevent new price increases tending to offset whatever roll-backs were effected by the latter. In order to hold back the rising tide of food prices more effectively than ever before, the Office of Price Administration built its dikes higher, made them thicker, extended their length and otherwise strove laboriously during 1944 to cope with its enormously complex burdens. Price ceilings were extended to new crops, as in the case of peaches, pears, melons and a variety of other fruits. Price controls were also extended to hitherto uncovered areas of the country, as in the case of fresh fruits and vegetables and restaurant regulations, with the result that by the end of June, "about 99 percent of the Nation's 600,000 retail food outlets, serving slightly over 98 percent of the population were subject to community pricing orders."<sup>46</sup> Moreover, price controls were extended to more stages of the distributive system between producers and consumers, establishing in the case of cheese, for example, specific price ceilings for the cheese factory, cheese maker, assembler, primary wholesaler and service wholesaler. In addition, and of major importance, was the continued transfer of commodities from under ceilings which had been established by a blanket freezing of prices (at the levels which had obtained at some specified time in the past) to new ceilings, which took later cost developments into consideration, which were frequently industry-wide, and which were defined in dollars-and-cents. In contrast to these stabilization measures, there were very few outright reductions in price ceilings, although it was done in the case of live fish at wholesale levels in port cities. On the contrary, increasing advantage was taken during the latter half of 1944 of the provision in the Stabilization Extension Act, signed June 30, which required that, "appropriate adjustments be made from time to time in fresh fruit and vegetable prices when weather or other unforeseen disaster substantially reduces the crop yield."<sup>47</sup>

Inflation control posed problems of long-range cause and effect. Like a gathering avalanche, a few prices breaking loose from the matrix of established relationships quickly transmitted their momentum to neighbors on all sides until within a few months the pressure for correlative price and income adjustments once more pervaded the entire economy. During the period under review, each year's urgencies were traceable primarily to the ineffectualities of the preceding year, with every month of

<sup>46</sup> *Tenth Quarterly Report of the Office of Price Administration*, U. S. Government Printing Office, 1944, p. 5.

<sup>47</sup> *Ibid.*, p. 2.

delay due to irresolution and resort to futile makeshifts serving to drip more oil on the brake-bands even as inflationary movements were acquiring still greater momentum. While strikes abated and wages gradually settled down around the Little Steel formula, providing an anchor for realistic economic stabilization, the cost of living was permitted to rise until relationships were once again out of balance in 1943. It has been noted that reinforced price controls and expanded subsidies succeeded not only in curbing further advances in the average retail price of foods during 1944, but in actually reducing it by some two percent. Here, then, was a renewed opportunity to strike a reasonable balance with industrial wage levels and, on the resultant firm foundation, to integrate price controls, rationing and subsidies into a comprehensive network more fully capable of minimizing the risk of new avalanches.

The need for more continuous control of food prices and supplies from the point of origin to the point of consumption had been widely discussed during the preceding year. In mid-June of 1943, for example, a major official of the Office of Price Administration's Grain Products Section had resigned "because I was not permitted to do a fair, honest and complete job which means fixing equitable ceiling prices at every level of production and distribution."<sup>48</sup> Shortly thereafter, Chester C. Davis had emphasized, in resigning as War Food Administrator, that:

I do not believe such subsidies will be effective unless they are accompanied here, as they are in England, by current tax and savings programs that drain off excess buying power, and by tight control and management of the food supply. We do not have in this country anything approaching these conditions.<sup>49</sup>

During June, July and August of that year, serious attention was given to the advisability of introducing a more comprehensive program of food controls, including government buying and resale of commodities below the price paid by the government as well as the extension of allocation controls to several stages in the distribution process.<sup>50</sup> Opposition by leading War Food Administration officials, however, together with Congressional hostility to the intensification of controls when its own efforts were

<sup>48</sup> *Business Week*, June 12, 1943, p. 7.

<sup>49</sup> From Mr. Davis' letter of resignation to President Roosevelt. (*New York Herald Tribune*, June 29, 1943.)

<sup>50</sup> See, for example, *Wall St. Journal*, June 24 and June 26, 1943; *Baltimore Sun* article on British food controls avowedly inspired by Mr. Davis' reference to them, July 8, 1943; *New York Times*, July 11 and 31, 1943; and *Washington Post*, August 9, 1943.

directed toward eliminating even the subsidy programs, soon discouraged further proposals along these lines. During 1944, continuing threats to the maintenance of the subsidy programs left Administration efforts in this area with little reach beyond seeking to ensure the retention of these cushions.

Agricultural income's rise to new peaks in 1944 demonstrated that the economic stabilization gains achieved in that year had not extorted undue sacrifices from farming interests. Nevertheless, the atmosphere of competitive snatching and elbowing for special advantage persisted. "Three-way labor-farm-industry battle over food production and food prices will be resumed in Congress this month," was the way *Business Week* reported the outlook for the new session beginning in January 1945.<sup>51</sup> As was expected, prices tended to belly out increasingly above, below, and around established control points, in turn forcing price and subsidy adjustments which foreshadowed progressive retreats. For the year as a whole, the average retail cost of the market basket actually surpassed even the 1943 record, average food expenditures were 7 percent above the 1944 level, and per capita farm income rose in like degree, while the per capita income of all non-farm residents and even the average wage income of employed industrial workers both declined below their 1944 levels.<sup>52</sup>

The bitter wrangling for differential gains by major economic groups drew active sustenance from inadequate preventive action on the part of the government. Not only did such a course threaten to undermine the national unity in facing up to the problems of effectuating our fundamental war aims and of overcoming the subsequent problems of reconversion, but neither the experience of World War I nor that of 1928-33 held out much promise that farmers would emerge from any such prolonged tussle with even as advantageous a position as they already possessed.<sup>53</sup> Moreover, the sympathetic friendship of labor and of consumers in general for the farmer, a friendship that had proven itself unselfishly whenever crises made agriculture dependent on large scale government assistance, could not but be alienated by unstinted farm demands which heightened the pressure on urban efforts to balance outgo with income.

The most prominent objective of economic stabilization was to prevent farmers, or any other major economic group, from effecting major alterations in established patterns of income distribution in their own favor. In the case of agriculture, this would have required the abandon-

<sup>51</sup> *Business Week*, January 6, 1945, p. 17.

<sup>52</sup> See Tables 48, 49 and 50.

<sup>53</sup> Oscar Zaglits, "Inflation and the Farmer," *op. cit.*, pp. 30-34.

ment of two current policies: first, relying on successively higher price offerings instead of on production controls and facilities allocations to encourage the conversion of farm output in accordance with war needs; second, seeking to allay the economic insecurities of farmers by expanding their current returns instead of providing a comprehensive program of current and long-term safeguards against major financial risks.

Reliance primarily on the incentive of price increases to expand and shift agricultural production needlessly brought the farm mobilization and economic stabilization programs into head-on conflict with one another. This apparent antagonism could have been largely resolved by fuller dependence on non-price offerings to supply needed incentives and aids to conversion, as will be discussed later. Indeed, such a shift in incentives was also necessary to deal more effectively with farmers' direct financial insecurities.

Even the admittedly generous level of agricultural prices during the last years of the war failed to uproot the fear of most farmers that for them financial catastrophe loomed beyond the end of hostilities. The extreme concentration of emphasis on price level controversies long diverted public attention from the inadequate guarantees of security of income and assets offered to farmers who were expected to respond to government appeals for the conversion and expansion of production. No program for economic stabilization could have proved fully effective which failed to dispel such justifiable anxieties. Government guarantees provided the most obvious means of easing such insecurities through non-inflationary means. To the extent that such concrete reassurances were not forthcoming, however, these fears inevitably led farmers to press harder and harder as the end of war approached for at least partial and indirect assistance through still higher prices.

Having reviewed the extent to which agricultural prices were brought into conformity with economic stabilization objectives, by means of more pervasive price ceilings and selective subsidies, consideration may now be directed to appraising the effectiveness with which agricultural prices were harnessed to the promotion of food mobilization objectives.

## 2. PRICES AND FOOD MOBILIZATION

Most of the food price controls which emerged during the war were focussed primarily on the defensive purpose of holding the line against inflation. But economic stabilization was not an ultimate end in itself during the war. Stabilization efforts could not have been permitted to freeze the economy into some transitional pattern of partial mobilization.

Their fundamental purpose should have been to actively advance the level of war mobilization by eliminating certain frictions and wasteful diversions in the use of available resources. The test of proposed policies, therefore, was not alone whether they held back or mitigated inflationary pressures but whether they also furthered mobilization aims.

The voluntary character of the greater part of the agricultural mobilization program made its achievements particularly dependent on the strength of the incentives offered to potential recruits. However, wartime price policies fell short of providing compelling motivational stimuli in several respects:

1. Returns from the more urgently needed and more efficient farm products were not substantially more attractive than those derived from less essential and less efficient commodities;
2. Returns from the more urgently needed and more efficient farm products were not always encouragingly rewarding relative to the costs involved in shifting to such undertakings;
3. Potential gains were frequently insufficient to fully offset the risks of conversion and expansion.

#### *Price Differentials and Conversion*

There was probably no more effective single means of accelerating agricultural conversion than to enhance the financial attractiveness of essential crops in comparison with those deemed either less essential or less efficient in the utilization of available resources. But in order to proceed in this forthright manner, the basic principle of wartime price policies would have had to be changed from one of seeking to assure a "fair return" on all crops, regardless of their essentiality, to one of frank discrimination in favor of war necessities.

Broadly conceived, the attainment of "parity" for agriculture is not only deeply-rooted in the aspirations of our farming population, the provision of reasonable returns to agriculture is essential to a soundly balanced national economy, whether in war or peace. The original and fundamental purpose of the campaign for parity was not to resist changes in the composition of market demand for farm products or advances in agricultural technology, but to promote the general welfare by aiding the small-scale, ill-organized farmers who man most of our agricultural resources to secure a more nearly fair share of the national income in competition with other major interest groups possessed of more effective organization or of other more powerful bargaining weapons. Those who nevertheless invoked the parity principle to encourage the continued diver-

sion of scarce resources to inessentials by demanding generous "parity prices" for them may well have done a great disservice to the entire farming community by undermining the established sympathy that large urban groups had come to feel for this agricultural cause.

Commenting on a Congressional bill to raise the parity price of agricultural commodities by including an allowance for labor costs in its determination, *Wallace's Farmer*, the well-known mid-western farm journal, termed it "a bill to induce farmers to grow crops we don't need," basing its criticism on the failure of general parity premiums to discriminate between essential and inessential commodities.<sup>54, 55</sup>

The tendency to rely on general gains in the agricultural price level to win farmer co-operation in the mobilization program instead of on tailoring price adjustments to the specific dimensions of each year's crop adjustment goals may be illustrated by reference to the pattern of price adjustments between 1944 and 1945, on the very threshold of the intensification of overseas food requirements. Prices received for all livestock and livestock products increased by 5 percent and for all crops by 4 percent. For the major components of the latter group, price adjustments were as follows: food grains + 5 percent, feed grains and hay - 3 percent, tobacco + 3 percent, cotton + 4 percent, fruits + 3 percent, oil-bearing crops + 3 percent and truck crops + 6 percent.<sup>56</sup> Inadequate differentiation in this important area certainly commends itself as one of the factors underlying the finding discussed in earlier chapters that the outstanding controllable contribution made by farmers to mobilization objectives was the generalized expansion of output, affecting nearly all major commodity groups, rather than the scale of internal adjustments among them.

One of the most significant respects in which the agricultural price situation differed from preceding years during 1944 and 1945 was in the extent to which the range of possible price fluctuations had been narrowed

<sup>54</sup> *Wallace's Farmer*, March 6, 1943. Continuing with its criticism of the bill, the editorial emphasized that, "It attempts to misdirect the efforts of millions of farmers in relation to the war effort. We need to get the eastern corn belt out of wheat and into soybeans and corn. But this bill pushes up the wheat price and urges farmers to go on growing wheat. . . . We need to get the South into soybean, peanut, feed and livestock production. But this bill pushes up the price on cotton and urges farmers to stick to cotton instead of turning to war crops."

<sup>55</sup> It was also interesting to note that, according to Price Administrator Prentiss M. Brown, this bill, H. R. 1408, would "raise parity prices of farm products by upwards of 14 percent and that this, in the course of time, would drive up retail prices of food by 10½ percent." (Senate Committee on Agriculture and Forestry, *Hearings on Inclusion of the Cost of Farm Labor in Determining the Parity Price of Agricultural Commodities*, U. S. Government Printing Office, 1943, p. 25.)

<sup>56</sup> *Agricultural Statistics—1946*, p. 552.



by the continued extension of price ceilings and by the proliferation of minimum price supports. As the Secretary of Agriculture emphasized, "Support prices are the rule rather than the exception and ceilings have been put on most products. . . . The support price program for 1944 includes 7 livestock products, 20 field crops, 15 fruits and vegetables for processing, and 49 seed crops."<sup>57</sup> Inasmuch as many farm products were already selling at prices equal or close to their ceilings, while most of them were also assured of protection against price decreases below 90 percent of their parity (or comparable) levels, a relatively high degree of short-term price security was provided by these measures.

These very safeguards, however, raised two obstacles to the effective employment of price policies for promoting further mobilization. First, the range of possible adjustment was relatively so small as to minimize the chances of offering really attractive price differentials to induce conversion from less essential to more essential commodities. Second, and more important, the very foundation stone of those safeguards was the concept that virtually all major commodities, whether more essential or less essential, were entitled to parity levels of returns and hence were to be guaranteed at least 90 percent of parity. So long as these price measures continued in effect, therefore, the provision of effective incentives to encourage the expanded production of new or hazardous war crops at the expense of those which were less urgently needed had to take the form of direct income benefits or of fuller protection against natural as well as market hazards, or, possibly, of providing direct aids to production in the form of especially attractive credits, of fertilizers, access to needed equipment, etc.

So powerful are prospective profit differentials in guiding the adjustment of our economic activities, that farmers, just like other members of the business community, were prone to examine the actualities of relative net returns as the decisive test of what enterprises the government really wished to encourage most. As a matter of fact, at various times inadequate and even directly unfavorable price differentials hindered the conversion of corn acreage to soybeans, of short-staple cotton to longer-staple varieties or to peanuts, of tobacco acreage to food crops, of lettuce, celery and melon acreage to carrots and other vegetables, and hindered the redirection of feed supplies from meat to dairy production. As an early illustration of a pattern which recurred with some frequency, one may recall that, in 1942, Secretary of Agriculture Wickard asked farmers to grow less cotton and to increase the average fiber length of that which was to be

<sup>57</sup> *Report of the Secretary of Agriculture, 1944*, p. 37.

produced. Instead, the country was given more cotton and the average fiber length was actually reduced. The failure to use prices as an instrumentality of publicly announced policy was evident from the fact that the 1942 cotton crop brought producers the highest prices and the largest returns since before the great depression.<sup>58</sup> Further evidence of the lack of consistency between market rewards and relative essentiality was provided by the comparison, noted earlier,<sup>59</sup> of price increases with changes in production costs for selected commodities up to 1943—which revealed that the margin between advancing sales prices and lagging production costs was substantially greater for tobacco, asparagus, celery and cotton than for such more essential farm products as eggs, dairy products, carrots and poultry. Similarly, behind the runaway wartime expansion of livestock production lay relationships between the price of feeds and the price of livestock products which during the entire period of 1940-45 were significantly unfavorable to further increases in livestock output only during a part of 1944<sup>60</sup>—although official pleas and threats designed to curtail such were voiced with great frequency.<sup>61</sup>

Rather than overcoming such impediments to war conversion by raising the prices of all war crops well above whatever levels had been reached by competitive inessentials, economic stabilization considerations would have urged that the prices of farm products needed for urgent war purposes be raised only to a point commensurate with their costs of production, while the attractiveness of inessentials was minimized by reducing their prices so as to yield a lesser return per unit of cost. Thus, short of compulsory controls over production, the restructuring of price differentials might well have proved the most expeditious means of dissipating the inertias of peacetime production habits.<sup>62</sup>

58 See Chapter V; also *Agricultural Statistics—1946*, pp. 70, 80-82.

59 Table 47.

60 *The Farm Cost Situation*, September 1946, p. 15.

61 For example, see *Business Week*, April 17, 1943, p. 117 et seq.; *Business Week*, April 8, 1944, p. 15.

62 In this connection, attention might well be directed to a suggestive, albeit admittedly oversimplified approach outlined by Warren C. Waite and Rex W. Cox of the University of Minnesota in "The Influence of Prices on Agricultural Production," *Journal of Farm Economics*, May 1944, pp. 382-388. After determining the relative price of each of eleven major farm products to the geometric mean of the ten others for each year and by five-year periods during 1922-41, they compared shifts in acreage, production and livestock numbers during these years with shifts in the relative prices of these commodities. From this analysis they concluded that:

...under the conditions prevailing in the 1922-41 period, a deviation of relative prices by as much as 5 percent from 100 would result in shifting agricultural re-

*Production Payments and Conversion*

If shifts were to be encouraged for war purposes from traditional crops and farm practices to new ones which may have been unfamiliar to the farm operator and somewhat ill-suited to his recent farm plans and current resources, measures had to be taken which went beyond assuring that the prices offered for essential crops would be high enough to repay the average production costs of those who had long specialized in such output. Unless penalties were to be assessed against patriotism, additional financial returns should have been offered to those undertaking new or more intensive types of production to compensate in part for the extra risks, the extra costs, and the extra efforts entailed. Beyond the point where price levels assured a reasonable margin of net returns over oper-

sources toward or away from the commodity in question. These results have important implications for agricultural policy. It appears that an effective control may be exercised over agricultural production through the medium of prices with a range of price variation considerably smaller than many have supposed. In this connection, it should be kept in mind that these are the results with freely fluctuating prices in periods in which the future of price is uncertain, and that with guaranteed prices the range of fluctuation required for production control would be even narrower.

Applying these findings to the war years, they were able to construct the following table comparing actual prices in 1943 with the prices which would apparently have been necessary to expand or to contract the volume of resources devoted to the production of each commodity:

FARM PRICES IN 1943 AND THE PRICES PROBABLY REQUIRED FOR EXPANSION OR CONTRACTION OF PRODUCTION

Commodities	Actual farm price 1943 <sup>1</sup> (dollars)	Prices with 1922-41 price structure <sup>2</sup> (dollars)	Prices for expansion, other prices unchanged (dollars)	Prices for contraction, other prices unchanged (dollars)
Hogs .....	13.83	12.32	12.94	11.70
Cattle ....	12.27	10.76	11.30	10.22
Milk .....	3.15	3.32	3.49	3.15
Butterfat ..	.503	.537	.564	.510
Sheep .....	6.63	7.81	8.20	7.42
Wool .....	.408	.428	.449	.408
Wheat ....	1.27	1.41	1.48	1.34
Corn .....	1.03	1.02	1.07	.97
Oats .....	.65	.55	.57	.52
Potatoes ..	1.33	1.24	1.30	1.18
Cotton ....	.199	.214	.225	.203

<sup>1</sup> These are simple averages of the monthly U.S. farm prices.

<sup>2</sup> With same general level as 1943.

On the assumption that price was the only factor in the expansion or contraction of production, the authors then point out that some prices, e. g., hogs and cattle, were permitted to rise considerably higher than would have been necessary even to ensure an expansion in output and also that other prices, e. g., milk, were relatively too low to encourage the increase in production sought by the government.

ating expenses to most producers, however, direct production payments would probably have proved far more effective than still further price increments in stimulating conversion, in guiding its direction, and in minimizing the resultant pressures on inflation control.

It has already been noted that only by carefully channeling our limited resources of land, equipment and manpower to the production of those commodities which were most urgently needed could the U. S. have avoided falling far short of domestic and foreign food requirements. Efficient mobilization of agricultural resources required that the production pattern of each farm be adjusted both to national requirements and to the plans of hundreds of thousands of other farms in the same agricultural region. With the well-being of millions of allied and friendly civilians abroad at stake, our government could not gamble on the remote possibility that some six million farmers, even with the best intentions, could arrive at individual production plans, actuated solely by market prospects, which would represent the most effective adaptation of available resources to food requirements. Close guidance was necessary, as it was on the battlefield and in war industries; and it was earnestly desired by farmers eager to maximize their contributions to the war effort. Such guidance as did materialize, however, was neither specific enough nor persuasive enough to maximize achievements. While higher prices alone conferred neither precise guidance<sup>63</sup> nor effective supervisory controls, the Agricultural Conservation Program had long demonstrated that a system of production payments makes it possible to guide how much of needed crops shall be produced on each farm, what inessential crops shall be reduced, and even what general methods of tending the crops and the soil shall be encouraged in the interest of raising yields per acre.

Lest such activities should appear to have required insupportably involved and cumbersome administrative controls, it would be well to recall that the Agricultural Adjustment Administration had been performing all of these functions for more than 6 years prior to U. S. entrance into the war, although to different ends, that its organizational machinery was still relatively intact, and that it lacked only an appropriate policy directive and special funds to so re-orient its operations as to carry out these very objectives.

As a second advantage, production payments could have effected far more stimulus to conversion per dollar of additional cost than higher

<sup>63</sup> "In response to [increased] support price for smooth peas, growers overshot War Food Administration goal and turned out 11 million bags—four times the average U. S. crop." (*Business Week*, July 29, p. 55.)

prices. Higher prices offered greater rewards without any means of assuring either a correlative increase in the production of war crops or further conversion from inessentials. No more convincing proof was needed of the lesser efficacy of higher prices in motivating conversion than the limited results achieved in 1943 or in the years following. Production payments, on the other hand, could have made possible the selective distribution of rewards so as to achieve the greatest results. Through the reasonable limitation of maximum payments, through generous minimum payments, through special additional rewards for meeting or exceeding suggested quotas, it would have been possible to intensify the inducements offered to small growers, to new producers of war crops, and to those capable of greatest conversion efforts—in each case getting direct results for every dollar devoted to the purpose of maximizing our food supplies.

Thirdly, production payments would have been far less inflationary than the higher prices that were proposed as the alternate means for encouraging greater conversion. There is no more direct an inflationary threat than a proposal to increase farm prices per unit of output; there was no more direct a negation of the nation's determination to control inflationary threats. Properly distributed production payments, in contrast, would have been significantly less inflationary because most of their cost would have been offset by the increased production which would have been stimulated without raising market prices.

A final consideration in deciding what kinds of conversion incentives might have proved most efficient should have been recognition of the obvious fact that the practical unit of conversion was not a given crop but each entire individual farm. Only at the national level could conversion be discussed purely in terms of price competition between one crop and another. On the farm, a shift from one major crop to another often necessitates an upheaval in the entire production pattern. Any sizeable change-over from corn to soybeans, for example, would have disrupted the livestock-feed balance which is the basic plan of a great many Corn Belt farmers. If incentives were really to initiate further conversion efforts, they should have been focussed on the totality of a farm's conversion problem rather than on individual facets alone. In this respect, too, benefit payments scaled according to the over-all conversion effort required of the individual farmers might well have proved better tools for stimulating major crop shifts than crude national adjustments in individual crop prices.

Special production payments to farmers undertaking the additional burdens of increased production and conversion would thus not only have

contributed heavily to the attainment of mobilization goals, but they would have been entirely consistent with the maintenance of stabilized price relationships, by providing extra returns only as direct reimbursement for the extra costs and extra efforts involved.

Secretary of Agriculture Claude R. Wickard laid great stress in early 1943 on the need for "incentive payments" to encourage increases in the production of certain urgently needed crops, including soybeans, Irish and sweet potatoes, dry beans and peas, peanuts and flax. His proposals were limited not only in crop coverage but even more seriously in purpose, for he specifically denied any intention to encourage shifts from "normal" crops, such as cotton, in favor of war crops.<sup>64</sup> Nevertheless, after prolonged discussion in the House and in the Senate, his essential proposals were rejected.<sup>65</sup> Similar measures were proposed repeatedly in later years, both in connection with efforts to further expand agricultural production, and in connection with efforts to curb further increases in farm product prices. But succeeding War Food Administrators never again sponsored the introduction of a "production payments" program on a comprehensive basis, and Congress never encouraged it. And yet, the alternatives which were adopted can hardly be regarded as having proved notably adequate to the tasks imposed by wartime developments.

### *Other Incentives to Conversion*

Although high prices promised a rosy future, the hard-headed farmer didn't easily forget that each sale brought only one installment of the total reward; that it would take many, many gallons of milk to recover his wartime investments in livestock and equipment, in addition to paying for current operating expenses. Legislative measures, and executive proclamations derived from them, offered some security in the face of post-war uncertainties by assuring government price supports, first at 85 percent of parity and later at 90 percent of parity on most war crops, for

64 "Mr. H. B. Sheppard [California]: ... you do not fully intend that there should be a cut in the normal production of other [farm products] ... ? Secretary Wickard: No sir; for instance, we have told cotton farmers to plant up to their allotments, which is the minimum provided by law, after they have planted other war crops. We have told the corn people the same thing. We are not trying to cut down on other crops, but we are trying to get all the production we can and put all the emphasis ... on these particular [war] crops." (*House Hearings on Agriculture Department Appropriation Bill, 1944*, p. 828.)

65 For the extended discussion of Secretary Wickard's proposals, see, *ibid.*, pp. 2-4, 798-838, 1338-42, 1357-84. For disapproval of the budget estimates for "incentive payments" by the Subcommittee on the Agriculture Department, of the House Committee on Appropriations, see: *ibid.*, pp. 847-48. For Senate discussion, see *Senate Hearings on Agriculture Appropriation Bill, 1944*, pp. 257-59, 825, 877, 919-26, 1050-51.

periods ranging up to two years after the ending of the war.<sup>66, 67</sup> Inasmuch as prices did not collapse until approximately two years after the World War I armistice, however, there seemed to be a practical need from the standpoint of wartime prospects to extend the duration of price supports so as to offer protection during the post-hostilities transitional period when the price structure might be most vulnerable.

In addition, it was apparent that the security of farm incomes clearly rests on the maintenance of heavy market demands as well as on the continuation of satisfactory prices. To provide needed assurances to understandably cautious farmers, appropriate safeguards should have been contrived during the war either to support continuing levels of demand consistent with the new capacities and new output patterns of our agricultural plant, or, at least, to so manage the readjustment of demand as to cushion its impact on producers. To encourage farmers who feared our inability to continue absorbing during the transition the increasing levels of production sought by mobilization, it would have been well to re-establish such supplementary consumption channels as were provided under the Food Stamp Plan and to expand those which had survived on a reduced scale under the School Lunch Program.<sup>68</sup> Further conviction toward this end would undoubtedly have been carried by the enactment of legislation for the post-war period either limiting the rate at which acreage reductions might be required in the transition period as a condition of eligibility for crop loans, or making compensatory payments available to those reconverting from wartime production patterns along lines to be recommended by the Department of Agriculture on the basis of studies of post-war national requirements.

Experience made many farmers even more fearful of threats to their capital assets which might result from unstinting co-operation in mobilization proposals. A sudden break in the value of the livestock and equipment purchased for the production of war crops, or wholesale foreclosures as a result of a sharp decline in the value of land and other holdings

66 Wartime price supports were provided in amendments to the Agricultural Adjustment Act of 1938 enacted as *Section 4, Public Law 147* (77th Congress), and as *Sections 8 and 9, Public Law 729* (77th Congress). Also see *House Hearings on Agriculture Department Appropriation Bill, 1945*, p. 658.

67 The detailed terms of price supports for a large variety of individual commodities were summarized in *Minimum Prices Currently Supported by the Department of Agriculture and Related Information*, Bureau of Agricultural Economics, mimeographed, June 1, 1943.

68 Both of these programs were devised in accordance with the authorization provided in *Section 32 of Public Law 320* (74th Congress), as supplemented on June 30 1939 by *53 Stat. 975*.

pledged as bank collateral, might quickly dissipate not only the whole of wartime gains but also much of what was painfully accumulated during the years of peace. Those who were asked to harness their assets in war employments needed assurances then and there of protection against such calamities—if not by the extremes involved in guaranteed maintenance of land, livestock and equipment values, then by compensatory long-term non-recourse credits, reconversion payments or other means of dissolving these potent mental obstacles.

Another factor that inhibited farmers from converting to new undertakings during the war was the differential risk involved in raising crops subject to weather, pest and other growing hazards which the farmer's past experience left him unequipped to minimize or even to assess accurately. In such instances, the government could readily have lowered the threshold of resistance by demonstrating its own willingness to share in these risks through the provision of low-cost high-coverage crop insurance on all war crops. Instead, the Agricultural Appropriation Act of 1944 required that even such limited crop insurance programs as had already been in effect be discontinued on all crops planted after July 31, 1943.<sup>69</sup> Crop insurance was made available again in 1945 through passage of the act of December 23, 1944 (Public Law 551), which authorized such programs on a national basis for wheat, cotton and flax, and also authorized the introduction of trial programs in no more than 20 representative counties for corn and tobacco.<sup>70</sup> Welcome as it was, however, this belated and closely circumscribed reinstatement of a program whose adequacy as an additional stimulant to wartime conversion was open to considerable question, even prior to its suspension, can hardly be considered to have substantially contracted the particularly enhanced insecurities which attended the production of war crops as the emergency was drawing to a close.

Price policies should have served merely as an instrument, albeit a most powerful one, to effectuate predetermined food mobilization objectives. Instead, Congress recast these roles by giving paramount emphasis to price objectives and leaving the food mobilization program to re-orient

<sup>69</sup> The crop insurance program was limited to wheat alone during 1939-41. It was extended to cotton in 1942. There was no further extension of this program to other crops prior to its suspension in 1943. (J. Carl Wright, "Federal Crop Insurance," *The Agricultural Situation*, September 1943, pp. 16-20.)

<sup>70</sup> See *House Hearings on Agriculture Department Appropriation Bill, 1946*, Part 2, p. 379 and also U. S. Department of Agriculture, *Report of the Manager of the Federal Crop Insurance Corporation, 1944*, mimeographed, November 15, 1944, including insert dated February 2, 1945.



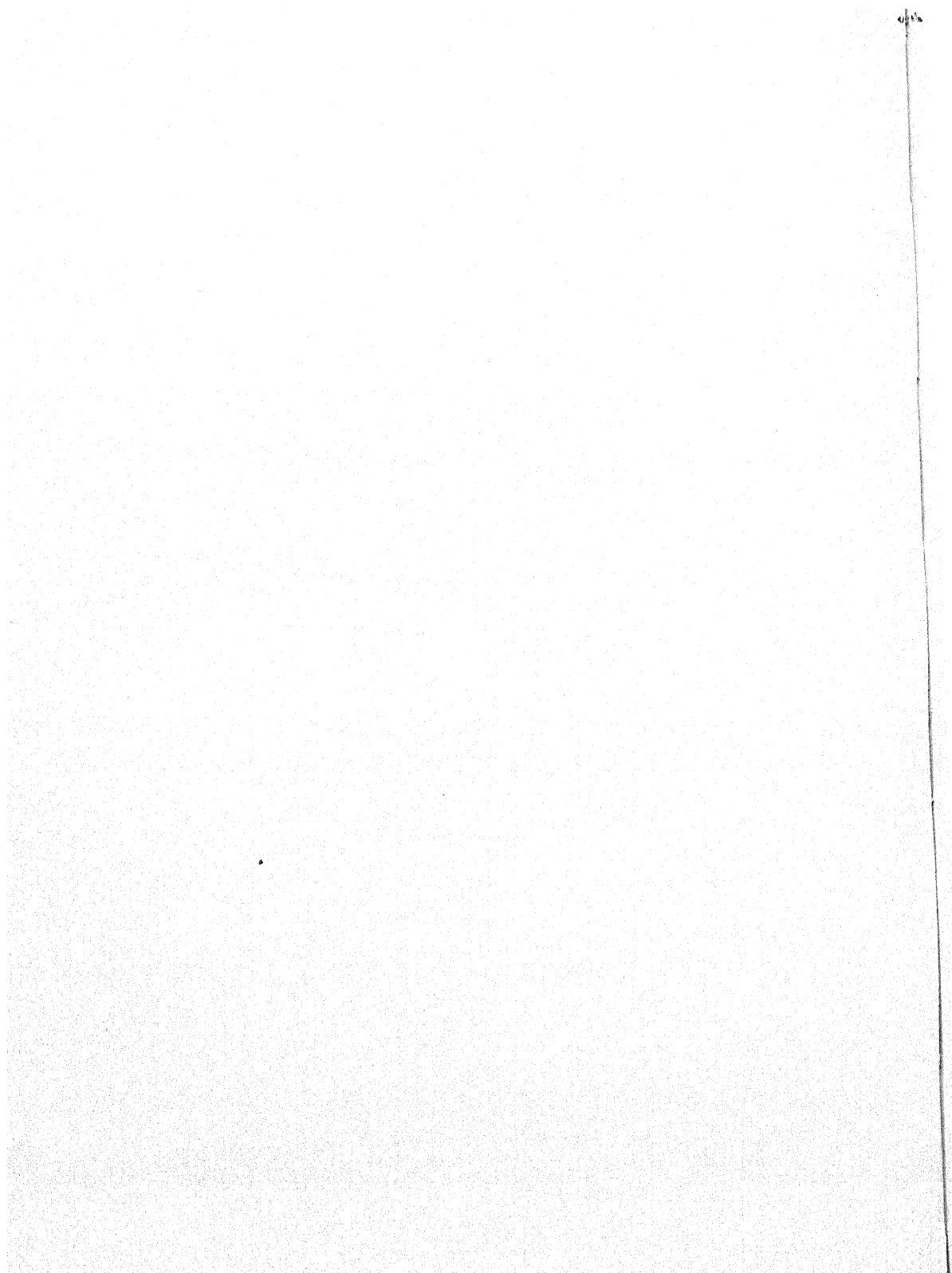
itself in accordance with the resultant patterning of incentives. This inversion may well be singled out as one of the prime causes of the serious shortcomings of this country's mobilization of agricultural resources. To cite but two of the most direct and most critical consequences of the dominance of price considerations, it may be noted: first, that Congressional insistence on the principle of insuring fair returns to the producers of all farm products tended to vitiate whatever efforts were made by food production officials to offer concrete encouragements to shifts in output in accordance with the relative urgencies of war requirements; and, second, that this overwhelming commitment of Congress to price measures was basic to its rejection of more direct controls over farm production and agricultural resources, and thus denied to food mobilization officials any effective counterweight to the guidance of production and marketing primarily by a structure of comparative price attractions quite deviate from the patterning of mobilization requirements.

Substantial progress was achieved during the last two years of the war in bringing agricultural price policies into closer conformance with wartime requirements, but such progress was predominantly in the direction of economic stabilization—with hardly more than indifferent gains apparent toward the more effective gearing of such price policies to the conversion of agricultural production. Unfortunately, the very imbalance between such advances tended to curtail the resultant benefits, for stabilization gains achieved primarily through the negative expedient of freezing an undesirable pattern of price relationships also served to reinforce the obstacles to fuller conversion.



## **PART D**

### **THE ADEQUACY OF AGRICULTURAL MOBILIZATION**



## CHAPTER XIV

### FOOD SHORTAGE EXPECTATIONS AND REALITIES

HAVING examined the problems encountered, progress achieved, and some of the apparent shortcomings in various sectors of agricultural mobilization, attention will now be turned to the climate of expectations and objectives within which food management policies were formulated during the last two years of the war, and to the extent and effects of the food shortages which materialized during the closing year and thereafter.

#### I. OPTIMISM IN 1944

The unjustifiably extreme slogan "Food will win the war and write the peace" was propagated with unflagging enthusiasm by leading government officials. But many of its most ardent proponents seemed at times to lose sight of its correlative implications that food shortages would mount precipitately upon the termination of hostilities and that commensurately enormous supplies would be necessary to cope with them. As far back as December 1942 an inter-departmental committee of the Federal government had estimated that the maintenance of food rations in liberated areas, even at minimum levels of adequacy, would probably necessitate the provision of imports approximating 20 percent of total consumption requirements in such regions during the first year after the enemy's withdrawal. A number of statements by responsible public officials during the following months envisioned comparably extraordinary needs. Moreover, confirmatory evidence was soon forthcoming from Sicily and Italy, not only with respect to the severity of food deficits but also indicative of such serious disorganization in food production, distribution, transport and economic relationships generally as to suggest substantial revision of current optimistic estimates of the rate at which local self-sufficiency might be regained.<sup>1</sup>

Such sober views had persisted through the spring of 1944,<sup>2</sup> but by mid-summer newspapers and government officials were imparting a very different picture of food conditions in liberated areas. For weeks after the invasion of Normandy, and particularly after the climactic break-through in Northern France, reporters sent back a flood of cheerful stories about

<sup>1</sup> For fuller discussion, see Chapter II.

<sup>2</sup> For example, see *House Hearings on Foreign Economic Administration Appropriation Bill for 1945*, pp. 284-6; also, *Senate Hearings on Foreign Economic Administration Appropriation Bill, 1945*, p. 7.

the adequacy of food supplies in successive villages and about the delicacies that were still readily for sale. Such reports patently reflected a failure to recognize the atypicality of rural Normandy, disregard of the general impoverishment of the local population relative to the purchasing power commanded by American troops, and ignorance of the fact that much of the seeming abundance was due to the recency of harvests and would have to be stretched thin to cover the many months before crops could again be gathered. Sheer repetition of these hopeful findings generated a climate of unfounded popular reassurance with respect to the adequacy of current American food policies, especially in view of the relaxation of domestic ration controls which was already far advanced. But, in addition, these anticipations were further reinforced by such official views as War Food Administrator Marvin Jones' astonishing statement to a House committee studying post-war problems that food conditions in Italy as well as in France had been found to be far better than expected.<sup>3</sup>

As the tide of optimism swelled, with ominous implications for the maintenance and intensification of mobilization measures,<sup>4</sup> the Director General of the United Nations Relief and Rehabilitation Administration, Herbert H. Lehman, was impelled to issue the following warning:

Let the world not be deceived by reports from portions of the areas already liberated indicating that the suffering in a particular community or group of communities has not been so great as had been thought. These reports are far outweighed by others which indicate that the enemy has been even more ruth-

3 "War Food Administrator Marvin Jones disclosed at a House postwar committee hearing today that this country, overpessimistic about the needs of liberated areas, has built up tremendous food stockpiles in Europe which should be disposed of overseas after the war to prevent a disruption of the home market. Italy, he said, required less food than we had anticipated. North Africa got into production very quickly. France, we are finding, is in far better shape than expected. 'Good' was the word he used. 'Very good', Lieut. Col. Ralph W. Olmstead, deputy director for supply [of the War Food Administration], added quickly." (*N. Y. Daily News*, August 26, 1944; also see *N. Y. Times* of same date.)

4 For example, *Business Week* was led to carry the following report in its issue of Sept. 2, 1944 (p. 11), "World stockpiles of food—for the armed forces and for relief—are far greater than will be required and are likely to result in an agricultural surplus problem before the end of 1945. Experience in liberated areas in Europe indicates that only the cities are suffering acute food shortages, and that these will absorb only a fraction of piled up supplies. Worse conditions are known to exist in Greece and Poland, but the population of Greece is small and Moscow—for political reasons—is likely to insist on sharing the responsibility of providing relief food to the Poles. With this changed stockpile situation, look for speedy shifts in the inflation picture."

less in his treatment of the occupied countries and their peoples than had been known or anticipated.<sup>5</sup>

Others, too, sought to correct the perspectives of the War Food Administration and of the public on the probable dimensions of the liberated areas' food needs. Within a few days after Mr. Jones' statement on Italy, Brig. Gen. William V. O'Dwyer, then Chief of the Economic Section of the Allied Control Commission for Italy, presented an alarming picture of extreme deprivation in Italy. He emphasized that even under Allied occupation the basic ration allowance in Rome was only 665 calories daily, as compared with a vital minimum of 1,400 calories needed to supplement available unrationed foods; that the infant mortality rate in Rome, for children in their first year, had risen to the shocking figure of 438 per 1,000 live births; that the incidence of tuberculosis had risen sharply, and that significant increases had been observed in the general as well as in the infant mortality rate.<sup>6</sup> In October, Food for Freedom, Inc., and various other groups urged the War Food Administrator to "plan for full production in 1945 rather than consider retrenchment," and they declared that, "Relief feeding will take at least 1,200,000 tons more food than was mentioned recently by War Mobilization Director James F. Byrnes as adequate."<sup>7</sup> During the following month, Roy F. Hendrickson, the Deputy Director-General of UNRRA in charge of supplies, published a careful survey of food conditions in the occupied areas of Europe revealing that staggering shortages loomed ahead with the progress of liberation.<sup>8</sup> At a public forum held early in December, the chief speakers, including Dr. John M. Cassels, vice-chairman of the Combined (U.S.-U.K.) Working Party on European Food Supplies, Dr. Howard R. Tolley, Chief of the Bureau of Agricultural Economics, and Mr. Hendrickson, agreed that the food requirements of liberated areas would materially exceed all available supplies.<sup>9</sup> Shortly thereafter, the Office of For-

5 "First Report of the Director General," *Journal of the Second Session of the Council, United Nations Relief and Rehabilitation Administration*, Vol. II, No. 4, Montreal, September 19, 1944, p. 27.

6 *N. Y. Times*, September 5, 1944; *Washington Post* editorial, September 16, 1944.

7 *Washington Post*, Oct. 5, 1944. The *N. Y. Post* (April 17, 1945) reported that Mr. Byrnes had estimated "that in the year following V-E Day our military food requirements will decline about 50 percent, or approximately 4,000,000 tons. This food, he said, would be available for European relief."

8 Roy F. Hendrickson, "Europe's Food and UNRRA's Job," *Foreign Commerce Weekly*, November 11, 1944, p. 3 et. seq.

9 *N. Y. Times*, December 2, 1944.

eign Agricultural Relations reported that the European food situation had deteriorated further during 1944<sup>10</sup> and the Secretary of Agriculture explained that, "There is little doubt that the outlook for domestic production [on the European continent] in 1945 is for a continued decline."<sup>11</sup> One might also note that leading newspapers carried reports from time to time between October 1944 and February 1945 indicating food shortages of significant proportions in Italy, France, Greece, Belgium, The Netherlands, Yugoslavia and North Africa.

Although challenged on occasion, as has just been illustrated, official thinking in the War Food Administration during the latter half of 1944 still gave evidence of continuing to be more closely preoccupied with the dangers of burdensome domestic surpluses than with the dangers of food shortages in liberated areas. Public statements by Lee Marshall, Director of the Office of Distribution in the War Food Administration, gave increasing emphasis to the imminence of surplus disposal problems.<sup>12</sup> On October 10 the War Food Administrator made a formal statement to the press declaring that, "With this year's record of food production we are safely through that critical period of expanding needs both for immediate use and reserves which challenged us at the beginning of the war."<sup>13</sup> At the Annual Agricultural Outlook Conference in November, a number of leading statements stressed the probability that demand for agricultural products would decline during the following year.<sup>14</sup> Indeed, the persistence of such views may be illustrated by the following press report of the

10 Department of Agriculture news release headed "European Food Situation Deteriorates," for use December 13, 1944.

11 *Report of the Secretary of Agriculture, 1944*, p. 26.

12 For example, see Mr. Marshall's address to the California Retail Grocers and Merchants Association, War Food Administration news release, Sept. 19, 1944. Also see his following month's *Report of the Director of the Office of Distribution, 1944*, U. S. Government Printing Office, 1944, pp. 1-3.

13 *Wall St. Journal*, March 23, 1945.

14 Thus, Dr. O. C. Stine opened his keynote address entitled *The Outlook for Agriculture in 1945 and Beyond* as follows, "Although the demand for the farm products of the U. S. will continue on a high level through 1945, it will probably be less than in 1944. Apparently the peak of this war demand for farm products was passed this year." (Bureau of Agricultural Economics, mimeographed, Nov. 13, 1944, p. 1.) The War Food Administration's Director of Production, J. B. Hutson, stated that among the assumptions which underlay the 1945 production goals was that, "the demand for lend-lease, relief and the armed forces would take a quantity of food equal to from 60 percent to 75 percent of the quantity being taken in 1944." (*Production Goals for 1945*, mimeographed, November 15, 1944.)



testimony of a leading official of the War Food Administration which was carried in that agency's *Daily Market Bulletin* for February 27, 1945:

SAYS END OF WAR WILL BRING BIGGEST GLUT OF SURPLUS  
FOOD IN HISTORY

(A.P.)—A prediction that war's end will drop upon American farmers the greatest glut of surplus food in history came today from House Appropriations Committee. Principal reason: Demand for free food in liberated Europe has been far short of expectations. Liberated areas beat American guesses on how long it would take them to restore farm production. In Committee testimony made public today, Ralph W. Olmstead, Vice President of the Commodity Credit Corp., said: "The areas of Europe liberated so far—France, Belgium, Italy, Poland, Rumania, and such places—did not require any such quantities of food as had been previously estimated. . . . In fact the effective requirements were much below the initial estimates." Committee Chairman Cannon of Missouri observed that with "the American troops returning home and the Army's demand for supplies slackening to a corresponding degree, and the lack of European market which has been counted upon to support American production for a couple of years, the decline of the demand on account of the release of domestic labor in war plants and the vast surplus on hand in the Army warehouses and pipelines and in the Commodity Credit Corp. is going to drop on the American farmer the greatest surplus of food and fibers ever known in the history of the world. Would you concur in that statement?" "Entirely," replied Olmstead.

Operating policies, too, were colored by this outlook. Civilian consumption was maintained at unprecedented levels.<sup>15</sup> The previous trend toward progressive expansion of annual government-financed overseas shipments of foodstuffs was reversed for the first time in 1944.<sup>16</sup> Aggregate United States food stocks were reduced instead of being further enlarged.<sup>17</sup> And these views may also be considered to have contributed

<sup>15</sup> For details, see Chapter XI. Incidentally, *Business Week* (December 30, 1944, p. 5) suggested the immediate source of this policy in reporting that, "WFA successfully fought off OPA's demands for more rationing of processed foods and meat until the going in Europe got really tough." According to the *Baltimore Sun* (March 20, 1945), "As late as December [1944] the WFA still was fighting OPA efforts to tighten up rationing regulations once more."

<sup>16</sup> *The National Food Situation*, January–March 1947, p. 2, Table 2. Also see Chapter X.

<sup>17</sup> *The National Food Situation*, January–March 1947, p. 2, Table 2.

to minimizing the pressure for greater expansion in the 1945 agricultural production program.<sup>18</sup>

## 2. INADEQUACY IN 1945

Not until March 1945 were authoritative steps taken either to awaken the American public to the true dimensions of prospective food deficits abroad or to reorient Federal policies on food production and exports in accordance with the admitted dimensions of the problem. In that month, mounting disagreements over the division of total supplies among the claimants for the armed forces, for domestic civilians, and for allied and liberated areas finally came to a head.<sup>19</sup> As a result, the Director of the

<sup>18</sup> For more detailed discussion of the 1945 agricultural production program, see Chapters IV and V. Some of the early stages in the development of the 1945 agricultural production program were reported as follows by *Business Week*:

"WFA has abandoned its 'all-out' farm production program in fear of price-breaking surpluses after V-E day. Aims for 1945 are below 1944 unattained goals, more in line with actual '44 acreage. Average yields per acre are calculated to cut production of food and feed crops 5% to 10% below '44 yields." (November 18, 1944, p. 7.)

"One foot on first base. That's the way WFA is playing 1945 farm production... if food fail[s] to meet home and foreign relief needs.... WFA can say 'We didn't dare increase acreages; just think of the surpluses we might have had if there had been another big crop.' On the other hand if 1945 weather is good and there is another bumper crop surpluses can be blamed on weather. Then WFA will say 'We didn't dare cut acreages. We would never have been forgiven if we had wound up with shortages. If weather is too bountiful, we can't be blamed.' Most experts figure that output probably will drop 5% to 10% from '44 level even though acreage goals are up about 1% over-all—purely and simply a matter of weather. They figure such a decline will be all to the good because it is estimated that military and lend-lease needs next year may drop between 25% and 40%. Moreover, civilian consumption may be curtailed a bit during reconversion." (December 2, 1944.)

"Statistical hocus-pocus by the WFA puts a different complexion on the 1945 farm program. WFA has performed the seemingly impossible feat of setting an over-all cultivated acreage goal smaller than its original request to farmers last fall and at the same time putting itself on record as asking a larger increase over 1944 than it did last fall. The 1945 acreage request was reduced from 300,411,000 to 300,275,000. The key to the whole mumbo-jumbo was the statistical trick of reducing the official estimate of 1944 planted acreage from 298,943,000 to 294,847,000." (January 20, 1945, p. 5.)

<sup>19</sup> For variant versions of the precise issues at stake, see report headlined, "WFA Balks at Drain on U. S. Food Supply for Relief Overseas," in *Washington Post*, March 11, 1945; report sub-headlined, "Clash of Home Supply, Foreign Commitments, Army Needs Creates Bitter Conflict," in *N. Y. Times*, March 14, 1945; report headlined, "Food Cut Forecast So U. S. Can Keep Export Pledges," in the *Baltimore Evening Sun*, March 14, 1945; and report sub-headlined "'Feed Americans First' Revolt Gaining Momentum" in *N. Y. Sun*, March 15, 1945. Also note the following paragraph in the *Wall St. Journal*, March 13, 1945, under the lead, "Congress Considers a Broader Investigation of the W. F. A.": "Some questions that may have to be answered: Why did officials who now say we can't meet European relief needs oppose (unsuccessful) new high crop goals for this year? Why do people who now cry about

Office of War Mobilization and Reconversion, James F. Byrnes, established a new inter-agency committee under the chairmanship of Leo T. Crowley, head of the Foreign Economic Administration, to resolve such differences.<sup>20</sup> One week later, President Roosevelt re-affirmed a policy that had grown progressively less influential during the preceding several months by announcing that this country would as a matter of decency retain and even add further restrictions on consumption if that were necessary to keep other peoples from starving. He also went on to express the opinion that U. S. food consumption could be reduced by 10 percent without any suffering at home.<sup>21</sup> With public attention centered on a new food crisis, another cycle of Congressional investigations of the food situation was soon under way.<sup>22</sup>

### *Food Crisis Fears*

As is not uncommon on occasions when generally unsuspected problems of serious national proportions are suddenly revealed to the public, among the fruits of early public awareness of this situation were a series of charges and counter-charges concerning responsibility for the crisis. War Food Administration officials blamed the Army for erroneously forecasting victory in Europe by October or November<sup>23</sup> and they blamed other government agencies serving as claimants for lend-lease and liberated areas requirements both for flooding the War Food Administration with requests "not only in triplicate, but in quintuplicate, with often all of them wanting food for the same set of people," and also for submitting requests often "way in excess of what could possibly be shipped or what could be delivered if we could get the ships to European shores."<sup>24</sup> Officials of the War Department countered that it never pretended that V-E day would ease food supplies;<sup>25</sup> and, pointing out that they were now charged with responsibility for feeding several million more persons on a military relief basis than had been anticipated, they went on to declare

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scarcities warn of tremendous surpluses after the war? Some Government officials say estimates of overall food needs were too low and the estimators are trying to dodge responsibility for miscalculations by blaming relief requests."

20 For text of order establishing this committee, see *N. Y. Times*, March 12, 1945.

21 *Wall St. Journal*, March 17, 1945.

22 *N. Y. Times*, March 20, 1945.

23 *Wall St. Journal*, March 23, 1945.

24 *Washington Post*, March 11, 1945.

25 *Business Week*, March 31, 1945, p. 17.

their need for "all the food we can get."<sup>26</sup> Republicans blamed the Democrats.<sup>27</sup> Congressmen and food industry officials blamed the old standbys: bureaucracy and red-tape.<sup>28</sup> Many who were primarily opposed to the price policies of the Office of Price Administration renewed their demands for a "food czar," some even suggesting War Food Administrator Marvin Jones for the post.<sup>29</sup> Others seized the occasion to press anew for still more liberal farm labor deferments and larger farm machinery production.<sup>30</sup> Some government food officials insisted that the British had accumulated excessive food stockpiles, only to have British spokesmen flare back with critical comments about the higher consumption levels being enjoyed in the U. S.<sup>31</sup> Those unsympathetic to foreign relief policies urged that these now be sharply modified to prevent farther sacrifices by the American people.<sup>32</sup> And indeed, War Food Administrator Jones was reported to believe that it was impossible to reduce civilian supplies further without endangering domestic morale and disrupting present food rationing programs.<sup>33</sup> It should also be added that a survey by the Office of War Information of 178 editorials on the food crisis between March 2 and March 24 revealed that, "The prevailing sentiment among the comments on Mr. Byrnes' committee was that meeting the needs of American civilians was of primary concern after those of the military had been satisfied."<sup>34</sup> The *Baltimore Sun* of March 20, 1945 also stated that some Congressmen were concerned about reports that, "The packing industry—whose trade association forecasts 'near famine' conditions in the domestic meat supply this year—is fighting with all means available to concentrate

26 *Washington Post*, March 11, 1945.

27 *Baltimore Sun*, March 20, 1945.

28 *Washington Post*, March 15, 1945; *N. Y. Times*, March 24, 1945.

29 *Washington Evening Star*, March 20, 1945.

30 *N. Y. Times*, March 20, 1945; also see the Office of War Information's mimeographed *Summary of Editorial Comment* (March 1945, p. 5), in which shortages of farm labor and of farm machinery were found to have been included among the 5 reasons cited most frequently by newspaper editorials in accounting for the shortage of food supplies; also see the House Committee report entitled *Food Shortages*, p. 16.

31 *Washington Post*, March 17, 1945; *Baltimore Sun*, March 19, 1945; *N. Y. Herald Tribune*, March 21, 1945.

32 *N. Y. Sun*, March 15, 1945; and for an extraordinarily strong expression of such views, see the *San Antonio Express*, March 15, 1945.

33 *Baltimore Sun*, March 14, 1945.

34 Office of War Information, *Summary of Editorial Comment*, mimeographed, April 1945, p. 4.

its sales in the highly profitable American market and avoid the less profitable business of selling to the Government for shipment abroad."

Public discussion of the newly recognized food crisis may be said to have graduated to a second and higher level—capable of contributing to the formulation of constructive measures—as interest came to center increasingly on the policies, rather than on the particular individuals, groups and agencies, most directly associated with the apparent debacle. In the resulting welter of analyses, several basic areas of common agreement emerged—most of them representing strong criticism of major policies which had been vigorously espoused by the War Food Administration.<sup>35</sup> First and foremost among the policies coming under attack was the extreme emphasis on avoidance of possible surplus stocks at the termination of hostilities lest domestic price levels be threatened thereby. The objective of this "bare-shelves" policy, as it was frequently labelled, was, according to a speech made by Lee Marshall in May 1944, "to come as close as possible to seeing that the last GI potato, the last GI pat of butter and the last GI slice of bread was eaten just as the war's last shot was fired."<sup>36</sup> Second and third were policies directly derived from the foregoing: the decision to speed the consumption of available supplies in 1944 by relaxing rationing controls, and the decision to cut back 1945 production goals below those set for the preceding year. Although some attention was given to political motives in expanding consumption during a presidential election year, most of the analyses reviewed laid heavier stress on the fear of surpluses as the more compelling causation.<sup>37</sup> With respect to the failure to formulate and to press for the attainment of production goals even exceeding those of 1944, virtually no alternatives were sug-

<sup>35</sup> This statement and the remainder of the paragraph are based primarily on the following sample of analytical comments: Address by James G. Patton, president of the National Farmers' Union, at a meeting of Food for Freedom, *The Newspaper P.M.*, March 22, 1945; *Wall St. Journal*, March 23, 1945; a series of four articles for the Associated Press by Ovid A. Martin, *Washington Evening Star*, March 20-23, 1945 as well as a summary article by Mr. Martin, *Washington Post*, March 25, 1945; *Business Week*, March 31, 1945, p. 17; a statement by the cost-of-living committee of the Congress of Industrial Organizations, *N. Y. Herald Tribune*, April 2, 1945; and a series of six articles by Malcolm Logan in the *N. Y. Post*, April 9-12, 17, 18, 1945.

<sup>36</sup> *Baltimore Sun*, March 20, 1945; *N. Y. Post*, April 11, 1945; and others cited above.

<sup>37</sup> Mention of political expediency was made by both the *Wall St. Journal* (March 23, 1945) and *Business Week* (March 31, 1945), but neither ascribed primary importance to it. It might also be added that there was no evidence of Republican pressure during this period for curtailing consumption.

gested to the surplus-psychosis explanation.<sup>38</sup> Yet, it should be noted that the reasonable possibility that the abnormally good weather enjoyed throughout the war might not last another year would alone have justified even higher rather than reduced goals. Fourth was the tendency, persistent enough to suggest a guiding policy, to underestimate the scale and seriousness of prospective food requirements, especially abroad. According to the *Wall St. Journal*:

Some of this conservatism is attributed by old line officials to the fact that W. F. A. drew some of its top officials from the food industry which was 'afraid to be caught with surplus stocks.' This 'industry faction' won out in making food plans over the other 'agriculture career group' officials in W. F. A. who argued for all out production as insurance against mistakes in [estimating] future food needs for war.<sup>39</sup>

If correctly represented, the determination to liquidate surplus stocks together with the under-estimation of post-hostilities requirements provided a sufficient basis for the War Food Administration's opposition to the accumulation of stockpiles for liberated areas.<sup>40</sup> A fifth factor cited frequently was the continuing inadequacy of distribution controls, as a result of which domestic shortages were more widespread than could be justified by the actual level of average per capita supplies.<sup>41</sup>

### *Prospective Requirements and Supplies*

What might be considered the third of the overlapping though distinguishable stages in the public controversy about food shortages came to a climax within six or seven weeks after the initial revelatory outbursts. It was marked by the issuance of several comprehensive and up-to-date

38 The *Wall St. Journal* (March 23, 1945), for example, merely stated that, "Fearful of a surplus, W. F. A. as late as January 15 was asking farmers to plant 364 million acres to crops in 1945, compared with a goal of 380 million acres last year."

39 March 23, 1945. As an alternative or perhaps supplementary explanation, Mr. Martin suggested in respect to differences between OPA and WFA on the restoration of rationing that the OPA was "consumer-minded" and hence "fearful of shortages" while the WFA was largely "producer-minded," which "influenced it to fear surpluses." (*Washington Evening Star*, March 22, 1945.)

40 "The U. S. promised Axis-dominated countries American food would 'win the war and write the peace.' Propaganda broadcasts to Europe told of plans to set aside a portion of each year's production for relief stock-piles. Yet, except for wheat, dry beans and a few other minor items, no such stockpiles were accumulated. As a result, the full force of foreign relief demands is falling suddenly upon current production." (*Washington Evening Star*, March 23, 1945.)

41 "WFA's reluctance to accede to tighter controls is blamed by OPA and Army for current maldistribution of scarce civilian goods." (*Business Week*, March 31, 1945, p. 17.)

surveys of actual and prospective food requirements and supplies. The first of these was presented to a Senate committee investigating the food situation by Deputy War Food Administrator Lieut. Col. Ralph W. Olmstead on April 4.<sup>42</sup> The newly established "Crowley Committee" issued its first report at the end of that month.<sup>43</sup> Others then followed in rapid order. Judge Samuel I. Rosenman, personal emissary of the President, released his findings on civilian requirements in the liberated areas of northwest Europe on May 1.<sup>44</sup> On that same day, the Office of Foreign Agricultural Relations completed its new study of the European food situation and outlook.<sup>45</sup> The report of the House Special Committee to Investigate Food Shortages followed on the very heels of the foregoing,<sup>46</sup> adding further to the valuable array of factual materials on the basis of which remedial food policies might have been devised.

Before summarizing the major findings of these surveys, attention should be called to the fact that it was most difficult even for experts to prepare reliable estimates of consumption levels in Europe at that time. This was due to the spottiness of trustworthy data on supplies, the recognized unevenness of distribution within the individual countries, and the obvious though immeasurable elasticity of the relationship between official rationing allowances and actual food intake per capita, with additions often procured by those able to afford them from the black market and with deductions often forced by the non-appearance of promised supplies.

European food import requirements were generally classified into six categories: food grains, principally wheat but also including rice, corn, oats and barley; fats, including lard and a variety of vegetable oils; animal proteins, consisting of meat, fish, eggs and cheese; pulses, such as dry beans and peas; sugar; and dried and canned milk products. The results of an earlier comparison of estimated requirements (excluding the potential needs of areas to be liberated in the Pacific) with available and prospective supplies had been summarized as follows by Dr. Howard R.

42 War Food Administration, *World Food Outlook—1945*, mimeographed, unpagged, April 4, 1945. For newspaper summary, see *Washington Post*, April 5, 1945.

43 Interagency Committee on Foreign Shipments, *First Food Report to the Director of the Office of War Mobilization and Reconversion*, U. S. Government Printing Office, April 30, 1945.

44 For official text of Judge Rosenman's summary, see *N. Y. Times*, May 1, 1945.

45 Office of Foreign Agricultural Relations, *The Food Situation and Outlook in Continental Europe, the Mediterranean Area, and the Soviet Union*, mimeographed, May 1, 1945.

46 *Food Shortages*.

Tolley, Chief of the Bureau of Agricultural Economics, at the very height of the War Food Administration's optimism about our being readily able to fulfill overseas requirements:

We have plenty of grain products, with the possible exception of rice, and we can meet the requests in dried beans and peas. But in the other four food groups the prospects range from nothing at all in sugar to relatively small amounts of fats, animal proteins and milk products. Yet in these four categories lie the products most urgently wanted.<sup>47</sup>

Even Lieut. Col. Olmstead's report of April 4, 1945 bore less resemblance to the rosy picture conveyed by him to a Congressional committee some five weeks earlier <sup>48</sup> than to the estimates presented by Dr. Tolley several months previously.

In its survey of prospective world food requirements and supplies for 1945,<sup>49</sup> the War Food Administration estimated that, although the stocks of wheat in the principal exporting countries had declined by nearly 15 percent during the preceding year,<sup>50</sup> the remaining carry-over, combined with anticipated new production during the year, would exceed total requirements by almost one-quarter of a billion bushels. In respect to rice, however, requirements were expected to exceed the probable supply by well over 40 percent.

On first trial balance, before undertaking the downward adjustment of requirements so as to conform with available supply, the indicated deficit in world meat supplies approximated 15 percent of total requirements. Lowered stocks, reduced production and increased needs all contributed to this imbalance. The extent to which domestic consumption levels might have to be reduced was suggested by the finding that, even with the liberated areas' needs wholly excluded, the prospective deficit still equalled 9 percent of requirements. Among other sources of animal proteins, dried egg supplies were expected to fall short of requirements by at least one-third, and requirements for cheese exceeded prospective supplies by about 2 percent, even with almost the whole of liberated areas' requirements again left out of consideration.

<sup>47</sup> *N. Y. Times*, December 1, 1944.

<sup>48</sup> See report in the War Food Administration's *Daily Market Bulletin*, cited above.

<sup>49</sup> *World Food Outlook—1945*. Except where specifically noted otherwise, all estimates of supplies and requirements in the next several paragraphs were taken from this comprehensive official report.

<sup>50</sup> Office of Foreign Agricultural Relations, *Foreign Crops and Markets*, April 2, 1945, pp. 158-9.



The shortage of sugar promised to be greater in 1945 than at any time during the war, in part because more than 700,000 tons had been diverted to the production of synthetic rubber in the U. S. during 1944. Estimates of a 15 percent deficit were regarded as minimal in view of the fact that they did not include the needs of all of the liberated areas, and in view of the possibility that the prolonged drought in Cuba and a hurricane in the Indian Ocean might require the reduction of production expectations.

Nor did the outlook for dairy products offer greater reason for optimism. The shortage in evaporated milk supplies relative to requirements was estimated at 16 percent. In the case of condensed milk the apparent deficit was 25 percent. The deficit in the supply of dried whole milk was held down to 33.7 million pounds (equal to almost one-fifth of total American production in 1944 of 178 million pounds)<sup>51</sup> only by "dissuading" liberated areas claimants from submitting requirements. With respect to non-fat dry milk solids, an indicated deficit of 237.7 million pounds, or about 40 percent of estimated production in the United States of 583 million pounds,<sup>52</sup> was said to be understated because inadequate account had been taken of the fuller extent to which this product could have been substituted, if available, for other animal proteins and dairy products. Butter supplies were so small relative to requirements that no deficit was even computed, all of the excess needs being transferred as claims to the fats and oils account.

A sufficiency of fats and oils was particularly important to bolster the nutritional adequacy of diets as restricted in variety and volume as those which obtained in Europe, and which would still have obtained even if the proposed supplemental import targets could have been met. But the total supply of fats and oils (excluding butter) was expected to fall 21 percent short of requirements. Here again, the gap was attributed in part to expected reductions in production, particularly of lard and of linseed oil, as well as to increases in liberated areas' needs. Moreover, it was pointed out by the War Food Administration that:

Even if U. S. civilian requirements [for edible fats and oils] should be cut to the unprecedentedly low level of 40 pounds per capita,<sup>53</sup> and the largest non-

<sup>51</sup> *Agricultural Statistics—1946*, p. 394.

<sup>52</sup> *Ibid.* It should be noted that the U. S. was providing more than 90 percent of the exportable supplies of this product available to the United Nations.

<sup>53</sup> This may be compared with WFA's estimate of U. S. civilian requirements of 47.8 pounds per capita as well as with actual civilian consumption in 1944 of 44.7 pounds per capita. (*Agricultural Statistics—1946*, p. 159.)

food uses are kept to 10 to 30 percent below the 1944 quotas, it will not be possible to meet liberated area requirements in full. This is true for all types of oils, lard, edible vegetable oils, lauric acid oils, linseed oil and tallow, although the deficit is somewhat more pronounced in lard and linseed than in the other groups.

In short, according to the War Food Administration report on world food prospects in 1945 presented to Senator Elmer Thomas' food investigating committee by Lieut. Col. Olmstead, "serious shortages" were found to be "rapidly developing for meats, fats and oils, dairy products, dried eggs, sugar and rice." "The basic reason for the increasing shortages in prospect for 1945" was found to be that, "supplies are down and requirements are up." And the implications for allocations policy were clear from the report's conclusion that, "requirements for relief feeding in 1945 will reach such a magnitude that they cannot be met from available world supplies without substantial cuts in present allocations to other claimants."<sup>54</sup>

Turning to the European continent in particular, the Office of Foreign Agricultural Relations drew a dark picture in its report of May 1, 1945,<sup>55</sup> not only of current food consumption levels but also of production prospects during the forthcoming years. Among its major conclusions were the following:

1. It may be estimated that the per capita consumption of food in continental Europe thus far in 1944-45 has been at a rate around 85 percent of the pre-war level, with a substantial deterioration in the qualitative composition of the diet. An average consumption of around 85 percent of the pre-war per capita intake of energy, with a large part of the population [mostly the rural people] scarcely affected by the reduction in total supplies, indicates that there are millions of people who subsist on as little as three-fourths, two-thirds, or even one-half of their pre-war calories. These millions, in the main, must live on the legal rations for 'normal consumers.' Even if a liberal allowance is made for the consumption of unrationed foodstuffs, and with rations fully available, the 'normal consumer' diet does not provide more than 1,750 calories per adult in Belgium, 1,600 in Norway, below 1,500 in France, and even less in some other areas. This is from 50 to 70 percent of the pre-war energy intake by this 'normal consumer' category.<sup>56</sup>
2. Continental Europe's supply of food from domestic sources in the consumption year 1945-46 [beginning August 1, 1945] will be the smallest

<sup>54</sup> As noted earlier, the foregoing quotations and supply and requirements estimates were taken from *World Food Outlook—1945*.

<sup>55</sup> *The Food Situation and Outlook in Continental Europe, the Mediterranean Area and the Soviet Union*.

since the outbreak of the war. The decline from the 1944-45 level may amount to from 5 to 10 percent for the continent as a whole.<sup>57</sup>

The far-reaching supply implications of these findings were suggested by Leo T. Crowley's warning, based on the determinations of the Interagency Committee on Foreign Shipments, that nearly 250 million persons in Europe would be in urgent need of supplemental food from abroad "just to exist."<sup>58</sup> By way of offering even more specific estimates, the Office of Foreign Agricultural Relations concluded that, "in terms of quantities necessary to bring about some improvement in liberated countries and to prevent large scale starvation in enemy territory, a total of about 12 million short tons of food would be needed for the continent in 1945-46. This total could consist largely of wheat, but should also include substantial quantities of fats and animal protein foods, as well as sugar."<sup>59</sup> It is at least interesting to note in passing that these estimates corresponded almost exactly in total proportions with those made by the Interdepartmental Committee on Food Relief, under Dr. Tolley's chairmanship, in December 1942.<sup>60</sup>

Even these staggering import needs, however, were based on estimates covering only the very minimum nutritional requirements necessary to prevent the further erosion of the health and working energy of the European peoples. The Health Committee of the League of Nations concluded in 1936 that the average daily caloric intake for a man or woman living in a temperate climate and not engaged in muscular labor should be 2,400 calories per day, and if engaged in moderate muscular work an

56 Some other ration levels noted in the report: In Austria, "the diet of the normal consumer now averages about 1,600 calories"; new ration increases in Southern Italy were expected to bring the daily value of legal rations to "approximately 1,000 calories" excluding supplies obtained in the free and black markets; ration cuts made effective at the beginning of March were estimated to have reduced the average consumption of the "normal consumer" to "a little over 1,600 calories" in Germany. In the Soviet Union, the 1944-45 food situation appeared "only slightly better from the standpoint of the civilian population than the extremely tight one of 1943-44." Other areas considered to be in great need included Finland, Greece, North Africa and possibly Poland, with little known about conditions in the Danubian Basin. (*Ibid.*, pp. 2, 7-11, 13, 15, 18 and 19.)

57 *Ibid.*, p. 1.

58 *Washington Evening Star*, May 4, 1945.

59 *The Food Situation and Outlook in Continental Europe, etc.*, p. 3.

60 It may be recalled from Chapter II that the latter committee estimated that approximately 5.8 million tons of food would be required during the first year of liberation to raise the rations of the first 115 million Europeans liberated to 2,000 calories per day. For 250 million people, this requirement would have come to 12.5 million tons. (*Food Relief for Occupied Countries*, pp. 1-2.)

additional 600 calories per day should be added. In view of the undoubtedly heavy muscular demands inherent in large-scale reconstruction programs, it should be recalled that only the patent non-existence of adequate food supplies had forced the UNRRA Council to reduce its original goal of maintaining consumption levels at 2,650 calories per day to an interim target of only 2,000 calories during the period of military control over liberated areas. The "Crowley Committee," too, emphasized that, "a level of 2,000 calories is strictly an emergency diet and is insufficient to maintain workers who must rebuild these liberated areas as well as their food production."<sup>61</sup> And yet, establishment of the 2,650 caloric level would have required food imports of more than double the enormous proportions estimated above.<sup>62</sup>

Thorough understanding of the food shortage problem required recognition not only of the scale, composition and locus of import requirements but of their extended duration as well. Remnants still lingered of a tendency to minimize the seriousness of the situation on the grounds that liquidation of these shortages merely awaited the arrival of the coming harvest season.<sup>63</sup> Such views betrayed a fundamental misunderstanding of the nature of the European food shortage, capable of frustrating the formulation of proper remedial measures. The widespread hunger, malnutrition and starvation in Europe was not a product of last minute looting and destruction of food stocks by the fleeing enemy; nor was it primarily the transient result of abnormally adverse weather during the preceding growing season. It was rooted, rather, in the progressive deterioration of European agriculture under exploitative German occupation; in the destruction of implements, machinery, livestock, seed stocks, breeding herds, food processing plants and transportation facilities; in the diversion of manpower, draft power and chemical fertilizers; in the widespread economic disorganization consequent on removal of the intricate

<sup>61</sup> *First Food Report to the Director of War Mobilization and Reconversion*, pp. 3-4.

<sup>62</sup> The estimates cited would have provided only enough imports to raise rations by 300-400 calories per capita to an approximate level of about 2,000 calories daily. Hence, the UNRRA target of 2,650 calories would obviously have required more than twice as much supplementary food per month.

<sup>63</sup> "A prediction that many of the present shortages will disappear when Germany falls came, meanwhile, from War Mobilizer Byrnes." (*Baltimore Evening Sun*, March 20, 1945.) "Food shortages probably are being overstated in this country now as much as were munitions pinches last January and February. Europe will need vast supplies only until harvest time. When this becomes generally known domestic consumers will howl about present restrictions and Congress will take up the cry." (*Business Week*, May 5, 1945, p. 10.)

exchange relationships and controls to which these economies had been geared to respond; and in the uncertainties attendant on these peoples' groping toward the redefinition of their political and economic objectives.<sup>64</sup> Accordingly, to be most effective, immediate assistance had to take the form not of a friendly hand-out until the next agricultural payday but of first-aid within the framework of a continuing program to promote rehabilitation and recovery. After forecasting the continuation of large food import needs in Europe on through 1945-46, the Office of Foreign Agricultural Relations added the melancholy comment that, "The Allies face a situation which holds no prospect of early improvement."<sup>65</sup> And yet the pull of optimism drew many eyes away from these grim perspectives. The editorial in the *St. Louis Star-Times*, titled "Food Controls Will Be Needed Even After the End of the War," was but a small and generally unheeded voice in the clamor of public controversy which was almost monopolized by concern with immediacies.<sup>66</sup>

The factual reports stimulated by the food crisis discussion also helped to re-emphasize some of the consequences of food shortages in the countries affected. A stream of informed reports<sup>67</sup> attested to the prevalence of malnutrition, physical debilitation, and the stunted physical development of children, to the increasing incidence of deficiency diseases such as tuberculosis, and to significantly heavier mortality rates. In addition, increasing evidence was presented of the role of food deficits in hindering the stabilization of prices, in preventing the suppression of black markets, in impeding reconstruction programs, in generating public disturbances and in endangering the stability of incumbent governments. Also revealed

<sup>64</sup> For fuller discussion of these matters, see Chapter II.

<sup>65</sup> *The Food Situation and Outlook in Continental Europe, etc.*, p. 1.

<sup>66</sup> This editorial, published on March 17, 1945, included such perceptive comments as the following: "The end of the war in Europe is not going to end our food problems, but there are those who try to say it will... the combination of domestic shortages and figures on overseas shipments of meat, sugar and other items will be a rare temptation to politicians in search of issues and headlines. Thus the President's concern over public opinion and food policies is well founded. There must be controls and restrictions for many months ahead and there must be intelligent acceptance of them as well as acceptance of the necessity to share a measure of our bounty with less fortunate peoples. Otherwise, the whole food program could collapse under the emotional reaction to victory in Europe. The producer of food, as well as the consumer, must prepare for the long pull... it is well that we decide now that humanitarian principles will be our guide. We went to war for those principles and we shall win a hollow victory if we forget them the day the shooting ends."

<sup>67</sup> For example, see nationwide broadcast on foreign food needs made by newspaper columnist Marquis Childs after a tour of European devastated areas. (*Washington Post*, April 1, 1945.)

was the serious distrust and even hostility which had been engendered in western Europe by the widespread failure of the allies not only to meet their pledged supply commitments but even to prevent the reduction of rations below the levels which had been available under enemy occupation. Some indication of the extent of these shortcomings was provided by the *N. Y. Times*' report that total Allied food shipments to France, Belgium, The Netherlands and Greece from the initial stages of their liberation until the end of 1944 had equalled little more than one-half of the recognized import requirements of these areas for just one month.<sup>68</sup> That millions of persons in western Europe received smaller rations after liberation even than those provided under German occupation was duly noted in the "Crowley Committee's" report.<sup>69</sup>

In short, it was thus made thoroughly apparent in the spring of 1945 that European food import needs were enormous in scale, of desperate urgency, and quite probably of prolonged duration. And the ultimate significance of failure to cope with these needs was clearly outlined by Judge Rosenman's warning, upon returning from his survey of civilian requirements in liberated areas, that, "a chaotic and hungry Europe is not fertile ground in which stable, democratic and friendly governments can be reared."<sup>70</sup> Thus, these heavy burdens represented not only a challenge to the resources of the United Nations but a critical test of their willingness and ability to sacrifice jointly for the common cause of building a secure peace. In strongly urging such co-operation, the *N. Y. Times* declared:

This is the stage of the war when the [food] problem becomes most pressing. . . . The demands grow greater by the hour. So does the supreme importance of food as a political weapon, an instrument of order. Indeed the question of apportioning and distributing the supply so that other people shall have at least

<sup>68</sup> For the period noted, the *N. Y. Times* (March 25, 1945) reported food import needs per month for these four countries as totalling 463,000 tons, divided as follows: France 200,000 tons, The Netherlands 120,000 tons, Belgium 100,000 tons and Greece 43,000 tons. Actual food shipments up to January 1, 1945 had totalled 294,000 tons, with France receiving 175,000 tons, Belgium 65,000 tons, Greece 54,000 tons and The Netherlands none at all. Indicative of the same general scale of shortcomings was a report on total food and other relief supplies which was attributed in the *Christian Science Monitor* (March 14, 1945) to "a source close to the President." According to this statement, "Original Army plans, based on the collapse of Germany not long after D-Day, gave the French hope that the Allies would move 2,000,000 tons of relief into France between June 6 and December 31. The amount actually landed in the period, due partly to change, was 262,000 tons."

<sup>69</sup> *First Food Report to the Director of the Office of War Mobilization and Reconversion*, p. 3.

<sup>70</sup> *N. Y. Times*, May 1, 1945.

a crust of the common loaf is not a matter of decency or charity on our part. It is an enterprise essential to victory, and calling for as much co-operation among the victors as the settlement of any war problem.<sup>71</sup>

*Liberated Areas Aid Intentions and Results*

The assumption of leadership by the U. S. in the task of alleviating these food shortages offered invaluable opportunities for winning the deep-rooted friendship of the beneficiary people and for promoting realistic economic collaboration with the other participating nations. On the other hand, serious risks, too, were involved—including the likelihood of being held responsible for any widespread suffering attendant on shortcomings in resultant shipments, as well as for any inefficiency or discrimination which might develop in the distribution of available supplies. Moreover, under such conditions, it seemed most probable that all major U. S. food policies would thereafter be subject to close critical examination in a continuing test of this country's sincerity, efficiency, and generosity. As a matter of sober fact, the unparalleled scale of our resources left the U. S. no choice but to accept the role of leadership or to bear at once the blame for unavoidable failure. As Leo T. Crowley had recognized, "The United States must of necessity be the main source of supply" in meeting Europe's food import requirements.<sup>72</sup> This very judgment, however, also helped to illustrate our vulnerability to criticism, for the implication seemed clear that the inadequacy of the U. S. mobilization efforts in 1944 and earlier had contributed significantly to the extreme deprivation being suffered currently in most parts of Europe.

The widespread public interest generated in food issues during the spring of 1945, together with the intensive official re-examination of prospective requirements, offered the brightest prospects since 1943 of significant revisions in national food policies. The findings which emerged at the time tended in large measure to bear out earlier conclusions by responsible government bodies,<sup>73</sup> and thus to reflect unfavorably on their neglect by responsible authorities. But these new reports also provided a forecast of future problems and thereby emphasized the need for, and also

71 From an editorial entitled "Food in a Hungry World," *N. Y. Times*, March 23, 1945.

72 *Washington Evening Star*, May 4, 1945.

73 Among the more important of these may be noted: Interdepartmental Committee on Food Relief, *Food Relief for Occupied Countries*, mimeographed, Washington, D. C., December 18, 1942; and Sub-committee on U. S. Food Allocation Policy of the Interdepartmental Food Advisory Committee, *Fundamentals of a Wartime Food Program*, mimeographed, Washington, D. C., July 31, 1943.

suggested guides for, the reorientation of official objectives and effectuating measures.

The general outlines of the major food policy adjustments necessary to maximize U. S. contributions to the successful discharge of the responsibilities which lay ahead were readily apparent. To maximize our domestic contribution, it was necessary:

1. To press vigorously for expanding the output of farm products capable of yielding the richest returns in the form of needed nutrients;
2. To reduce domestic food consumption materially below the record 1944 levels;<sup>74</sup>
3. To increase heavily the net excess of food exports over imports by reducing U. S. takings of foreign supplies available for export to liberated areas as well as by expanding our shipments;
4. To double and redouble our exports of fertilizers, farm machinery, implements, seeds and other farm supplies.<sup>75</sup>

To maximize the total supplies made available by the United Nations, the U. S. had to undertake to persuade other countries to join with us in increasing necessary output and in reducing domestic consumption levels, so that the common burden might be shared equitably. To ensure the distribution of resultant aid in accordance with the relative minimum needs of various liberated areas, rather than in accordance with their relative capacities to make immediate repayment, consideration had to be given to the expansion of funds appropriated to UNRRA on a scale commensurate with the newly recognized proportions of need.

Keen recognition of the urgency of European needs continued. In July, Director of War Mobilization and Reconversion Fred M. Vinson, after noting that liberated Europe was "desperately short" of food and other supplies, emphasized that:

A relatively small amount of food from us can mean a great deal to Europe. For example, if the U. S. were to cut down its caloric supply by only 8 percent it would be enough to increase the daily supply of the above five food-poor

74 "The United States ate too much in 1944 and the first half of 1945." (Director of War Mobilization and Reconversion, *Third Report: The Road to Tokyo and Beyond*, U. S. Government Printing Office, July 1, 1945, p. 41.)

75 "In the light of present supplies, the most that can be accomplished is to provide such foods as will tide the people of Europe over their immediate difficulties. The long term problem is to supply as quickly as possible transportation equipment, fuel, fertilizer, seeds and other things which they must have in order to get their own agriculture going again." (*First Food Report to the Director of the Office of War Mobilization and Reconversion*, p. 4.)



countries (Belgium, The Netherlands, Norway, Greece and Albania) by more than 80 percent and give them the 2,600 calories a day needed for an active population.<sup>76</sup>

During the following month, Under Secretary of State Joseph C. Grew declared that, "Relief shipments to Europe must be increased if famine and chaos are to be averted."<sup>77</sup> Also, in mid-August the Combined Food Board revealed that conditions of stringency existed in respect to virtually all basic foodstuffs except wheat, and that, during the year ahead, the world faced deficits: of 1,800,000 tons of fats compared with a surplus of 100,000 tons during the preceding year; of 1,900,000 tons of meat as compared with a deficit of only 100,000 tons in 1944; and of 2,400,000 tons of sugar as compared with a shortage of only 200,000 tons in the preceding year.<sup>78</sup> One month later the Director General of UNRRA told the Senate Foreign Relations Committee that, "This is the crucial period. The coming winter in Europe and the Far East may well be the grimmest since World War II began. We are racing against time to save hundreds of thousands of lives from starvation and epidemic."<sup>79</sup> A special report on *The Food Needs of Liberated Europe* warned of the possibility "of appalling hunger for millions and starvation for many" during the forthcoming winter.<sup>80</sup> Then, at the beginning of October, the Office of Foreign Agricultural Relations released its comprehensive survey of the *World Food Situation in 1945-46*,<sup>81</sup> which revealed that deficits would probably prove to be of even more alarming proportions than had been indicated in its report of five months earlier. With respect to continental Europe (excluding the U.S.S.R. and, of course, the United Kingdom) and North Africa, it was expected that, "this year's output will be about 15 percent less than that of 1944-45 and may be 25 percent below the pre-war aver-

76 *Third Report: The Road to Tokyo and Beyond*, pp. 47-48.

77 Department of State, *Our Relief Policy for Europe*, mimeographed text of broadcast over National Broadcasting Company's "University of the Air" on August 11, 1945, p. 1.

78 *N. Y. Times*, August 10, 1945.

79 United Nations Relief and Rehabilitation Administration, *Remarks by Herbert H. Lehman, Director General of UNRRA, before the Foreign Relations Committee, U. S. Senate*, mimeographed, September 12, 1945, pp. 4-5.

80 Office of War Information, *The Food Needs of Liberated Europe*, mimeographed, September 15, 1945, p. 2.

81 Office of Foreign Agricultural Relations, *World Food Situation in 1945-46*, mimeographed, October 1, 1945.

age." Production was also expected to remain far below pre-war levels in Japan and in the areas formerly occupied by Japan. Turning to requirements, it was estimated that:

... Continental Europe [exclusive of the U.S.S.R.] would require approximately 18,000,000 tons of food imports during 1945-46 in order to raise legal nonfarm supplies in liberated areas to 2,000 calories per person per day, permit some increase in imports to neutral countries and provide the minimum food supplies necessary to prevent widespread disease and unrest in the enemy countries. This total should be composed of roughly 15,000,000 to 16,000,000 tons of wheat [over 500,000,000 bushels], 1,000,000 tons of fats and oils, 750,000 tons of sugar, and substantial quantities of dry legumes, meats, and dairy products.

North Africa, normally a net exporter of food products, will need to import over 2,000,000 tons of grain in order to cover minimum requirements. There will also be a deficit in fats and oils. Sugar requirements of North Africa will have to be met, as usual, by imports.

... An estimated 2,000,000 tons of food, mainly in the form of wheat and rice, will be required to prevent an acute food shortage in the urban areas of China. India will require over 2,000,000 tons of rice and wheat; and if the early estimate of the rice crop fails to materialize, imports may have to be somewhat larger to avert serious food shortages. Food supplies in Japan will not be sufficient to meet the minimum requirements of that country. The Philippines and Ceylon will need some imports and possibly the Netherlands Indies as well.

These requirements are in addition to those of the other normally deficit food-producing areas. Despite the high level of food production in the United Kingdom, it will require [imports of] approximately 5,000,000 tons of wheat, 1,750,000 tons of meat, 1,000,000 tons of oil or equivalent in oil products, close to 1,500,000 tons of sugar, and 300,000 tons of dairy products in order to continue present restricted rations.<sup>82</sup>

Not only was there continued awareness of need, but this nation's intention to help won wide popular support and was reiterated by our highest government officials. Public reaction to such aid proposals was indicated by the results of a poll conducted by the American Institute of Public Opinion after the defeat of Germany, which were summarized as follows:

... seven out of 10 Americans said they believed that many Europeans would starve unless we sent them food. A majority realized that our rations would

<sup>82</sup> *Ibid.*, pp. 1, 3-4.

be reduced if we sent food to Europe; nevertheless, 85 percent said they were willing to continue putting up with present shortages of butter, meat, sugar, and other rationed foods in order to help feed Europe. And 70 percent said they and their families would even be willing to eat one-fifth less than they are now to send more food to Europe.<sup>83</sup>

The American Federation of Labor asserted that:

If starvation is to be prevented in Europe, Americans must share some of their food. As American workers we are willing to tighten our belts so that workers in Europe may be kept alive. We can spare enough to save Europe without any danger of undernourishment, though we may have less of some foods we like.<sup>84</sup>

In mid-year, Director of Mobilization and Reconversion Vinson listed as one of the five major objectives of our governmental policy to "Provide food and aid that will help the liberated countries lift themselves to their feet and once more become self-sustaining."<sup>85</sup> Upon returning from the Potsdam Conference, President Truman reported:

Europe today is hungry.... As the winter comes on, the distress will increase.... If we let Europe go cold and hungry, we may lose some of the foundations of order on which the hope for world-wide peace must rest. We must help to the limits of our strength. And we will.<sup>86</sup>

One month later, the President re-affirmed this pledge and went on to declare:

This government has abundant evidence that the American people are aware of the suffering among our allies. They have also made plain their determination that this country shall do its full part, along with other supplying nations, in helping to restore health and strength to those who fought at our side both in Europe and in the Far East. It is an American responsibility not only to our friends, but to ourselves, to see that this job is done and done quickly.<sup>87</sup>

Actual results, however, once more fell substantially short not only of desperate needs, but even of what may reasonably be considered to have

<sup>83</sup> *Our Relief Policy for Europe*, p. 4.

<sup>84</sup> American Federation of Labor, *Labor's Monthly Survey*, May-June 1945, p. 3.

<sup>85</sup> *Third Report: The Road to Tokyo and Beyond*, p. 2.

<sup>86</sup> *Our Relief Policy for Europe*, pp. 5-6.

<sup>87</sup> White House news release, *Statement by the President in Connection with the Relief and Rehabilitation Program*, September 17, 1945.

been practicable potentials. Although food production declined in 1945, the decrement was no more than one and one-half percent—placing the total well above all previous records except that of 1944. But food imports were maintained at the high 1944 levels instead of being cut back. Moreover, supplies taken from accumulated stocks were the largest since 1942. As a result, total food disappearance in 1945 was only one percent below the unprecedented peak of 1944. In view of the vast supply thus made available, the primary key to shortcomings in the volume of aid made available to liberated areas necessarily lay in the patterning of allocations. Analysis of distribution by claimants reveals that, in spite of much vigorous talk about consumer sacrifices to aid the long-suffering peoples of Europe, 1945 civilian food consumption per capita in the United States actually surpassed 1944 levels to establish a new all-time record. On the other hand, allocations for government-financed and commercial shipments actually declined as did allocations for the armed forces, including allowances for the military feeding of civilians. It is of interest to observe that inasmuch as government-financed exports and commercial shipments accounted for only 6.9 percent of total food disappearance in 1945 (while imports contributed 4.8 percent of that total), our net exports came to only 2.1 percent of total food disappearance, less than in any year since the United States entered the war—although needs far surpassed all previous levels. One may note, also, that even if civilian consumption had been reduced only by the modest 8 percent mentioned tentatively by Mobilization Director Vinson, to say nothing of the 20 percent cut which the Gallup poll reported a large majority willing to accept, it would have been possible to almost double the food allocations available for government-financed and commercial exports.<sup>88</sup>

### 3. THE RESURGENCE OF OPTIMISM

Maintenance and expansion of domestic civilian consumption was never justified by officials as preferable to or more essential than aid to liberated areas, but rather as the natural outcome of having supplies sufficient for the former as well as to meet the effective demand of the latter.

<sup>88</sup> Total food disappearance declined from 136.8 percent of the 1935-39 average to 135.5 percent. The relative distribution of this total among major claimants differed as follows in 1945 as compared with 1944: the proportion going to domestic civilians increased from 80.3 percent to 81.3 percent; allocations to the military, including military feeding of civilians, declined from 12.7 percent to 12.2 percent; government-financed plus commercial shipments declined from 7.7 percent of the total to 6.9 percent. For further details, see *The National Food Situation*, January-March 1947, Tables 1 and 2, p. 3; and also Chapter X.

This position was the basis for opposition to further reductions in domestic consumption even within one month of the original food crisis—at a time when there was still much talk of bold measures to ensure maximum aid to Europe.<sup>89</sup> Such views were elaborated more fully in September by President Truman, on the basis of advices received from the Department of Agriculture, as follows:

The limiting factor in meeting the minimum needs of the liberated peoples is no longer one of shipping. For the moment, in the case of most commodities, it is no longer a problem of supply. Today it is primarily a two-fold financial problem: first, to work out credits or other financial arrangements with the European governments; second, to make additional funds available to UNRRA for emergency relief.

...this government is taking necessary measures in relation to production, distribution and shipping of supplies to insure a broad equitable and continuous flow of current stocks and new production of relief and rehabilitation supplies for liberated areas, which it is anticipated will be required, in addition to those quantities which they have already requisitioned. One purpose of such measures is to prevent the dissipation of available supplies in domestic channels where they are not essential.

When I returned from Potsdam I said, 'If we let Europe go cold and hungry, we may lose some of the foundations of order on which the hoped-for world-wide peace must rest. We must help to the limits of our strength. And we will.' That pledge, made not only to our Allies, but to the American people, must be kept. It should be made perfectly clear that, contrary to the belief of many, relaxation of rationing on the home front is not a factor in the allocation of relief supplies to Europe.<sup>90</sup>

Shortly thereafter, Director of Mobilization and Reconversion John W. Snyder reported that:

Three months ago there was considerable anxiety about food shortages. Since Japan's surrender, the situation has improved substantially and the prospect is for adequate supplies of most foods. . . . The easing of the general food situation . . . has made it possible for the Government to relax many food controls. The Office of Price Administration since VJ-day has discontinued the rationing of canned milk, canned fruits, vegetables and cheese. The point values for meat, butter and other foods have been lowered. In

<sup>89</sup> *Washington Post*, May 9, 1945.

<sup>90</sup> *Statement by the President in Connection with the Relief and Rehabilitation Program.*

addition, the Department of Agriculture has been able to drop about half its orders regulating the distribution of foods by processors and dealers.<sup>91</sup>

The trend continued despite the stark outlook described by the Office of Foreign Agricultural Relations' *World Food Situation in 1945-46*. Thus, in describing the basis for the decision to terminate meat rationing, *Business Week* reported that, "Convinced that stocks of meats and fats are ample for the U. S. plus relief needs, [Secretary of Agriculture] Anderson gave the nod that made red-point rationing past history."<sup>92</sup>

In concluding that aid to liberated areas, a major focus of wartime food strategy, fell short of urgently needed minimum requirements and of practicable capabilities as well,<sup>93</sup> it should be noted that the latter point has sometimes been questioned by those contending that deficiencies in aid were fully attributable to the barrier of inadequate shipping. Although such shortages were unquestionably of serious proportions during much of the war, it is not easy to demonstrate their primary responsibility for the particular shortcomings under discussion. The "Crowley Committee" itself remarked in the spring of 1945 that whereas shipping difficulties had been most severe during the previous year, "more adequate port facilities" had since been cleared and "more adequate shipping is becoming available for liberated areas."<sup>94</sup> Germany's defeat certainly eased further the pressures which had been imposed by the two-front war in widely separated theatres, despite the immediate intensification of efforts to build up military supplies in the Pacific. Moreover, as has already been indicated, the surrender of Japan in August completed the elimination of shipping as a factor limiting the flow of exports to liberated areas. It seems apparent, therefore, that the supply of shipping which might have been used for moving foodstuffs to deficit areas was substantially greater

91 Director of War Mobilization and Reconversion, *Fourth Report: Three Keys to Reconversion*, U. S. Government Printing Office, October 1, 1945, pp. 32-33.

92 *Business Week*, December 1, 1945, p. 19.

93 It may be of interest to mention at this point that, despite the great importance attached by the "Crowley Committee" to expanding shipments of productive agricultural resources as well as of food (*First Food Report to the Director of the Office of War Mobilization and Reconversion*, p. 4), and despite the extraordinary increases which had been effected in farm machinery production and in the supply of such equipment on farms (see Chapter VII), the proportion of domestic farm machinery and equipment production allocated for exports rose from an average of 10.9 percent during 1943 and 1944 to only 11.9 percent in 1945. (Bureau of the Census, *Farm Machines and Equipment: 1946*, May 9, 1947, p. 4.)

94 *First Food Report to the Director of the Office of War Mobilization and Reconversion*, p. 3.

for 1945 as a whole than had been the case in 1944. Yet total government-financed and commercial exports in 1945 did not increase as compared with 1944; they declined. Viewed somewhat differently, it would seem that if shipping had truly been the controlling bottleneck in effectuation of the liberated areas supply program, then one might reasonably have expected to see food stocks in the U. S. being piled up to record proportions pending the release of additional bottoms. Instead, such stocks actually declined even more rapidly than had been the case in 1944 under the aegis of the "bare-shelves" policy<sup>95</sup>—despite the fact that the new Secretary of Agriculture, Clinton P. Anderson, had taken occasion in July 1945, shortly after his appointment, to specifically disavow such a policy.<sup>96</sup> It should also be noted that domestic civilian consumption increased most rapidly during the period following Japan's defeat, a period marked not only by the ample availability of shipping, and by the increase in liberated areas requirements under the shadow of the coming winter together with the addition of Far Eastern needs,<sup>97</sup> but also by the rapid withdrawal of domestic rationing curtailments.

<sup>95</sup> The proportion of food supplies which disappeared during the year contributed by the reduction of available stocks rose from 0.7 percent of the total in 1944 to 1.1 percent in 1945. In amount, the decrease in stocks during 1945 was two-thirds greater than in the previous year. (*The National Food Situation*, January-March 1947, Table 2, p. 3.)

<sup>96</sup> "That is why I have been telling the American public that mine will not be a bare-shelf policy for fear of surpluses. That's why I have stood as the apostle of abundant production." (*Address in New York City before the Advertising Federation of America*, Department of Agriculture news release, mimeographed, July 11, 1945, p. 3.)

<sup>97</sup> For example, see report headlined, "UNRRA Puts Focus on Far East Needs," *N. Y. Times*, August 10, 1945.

## CHAPTER XV

### AFTERMATH

WHATEVER the primary reason, whether due to wishful thinking, or to an unbalanced regard for only part of the objectives of wartime food strategy, or to fundamental misunderstanding of the causes of food shortages in liberated areas, overseas food import requirements were consistently under-estimated at grave cost to the peoples of needy countries, to the rehabilitation of their twisted and shrunk economies, and to the fulfillment of this nation's paramount post-war objectives as well.

The grim deprivations suffered in Europe during the winter of 1944-45 were probably intensified in some measure by the fact that influential officials in this country had grossly over-estimated the extent to which the first peacetime harvest in newly-freed regions would fulfill urgent needs. Even in the midst of sincere regret about the sorry circumstances which emerged, there remained a good deal of confidence that the very next harvests would surely eliminate further food shortages of serious dimensions. Of course, awareness grew during 1945, especially after the heated controversies about food policy in the spring, that the forthcoming winter might cause even more bitter suffering than had its predecessor. Nevertheless, the closing months of 1945 once again found opinions persisting in presumably informed official circles that, this time for certain, major relief programs needed to be focussed only on the period before the 1946 harvests were reaped.

In its "1946 Outlook Issue" of *The National Food Situation*, the Bureau of Agricultural Economics predicted that, "Exports and shipments of food in 1946 will continue large, assuming that satisfactory financial arrangements are completed," but then qualified this forecast by adding that, "The greater part of these exports will move in the early months of the year."<sup>1</sup> In announcing 1946 production goals, the Department of Agriculture stated, "Secretary of Agriculture Clinton P. Anderson today recommended national farm production goals for 1946 which call for a total acreage of over 356 million acres, not as large as the 1945 goals . . ."<sup>2</sup> At the close of the year the Director of Mobilization and Reconversion reported that, "Shipments to [liberated] countries were about 10 percent of the available foodstuffs in the fourth quarter of 1945,

<sup>1</sup> *The National Food Situation*, October 1945, p. 2.

<sup>2</sup> Department of Agriculture news release, November 30, 1945.



and will have to be maintained at or above this level during at least the first half of 1946 in order to alleviate starvation and economic paralysis in allied countries.”<sup>3</sup> One week later, the Department of Agriculture felt impelled to warn farmers that food surpluses large enough to demoralize markets for such farm products as flour, cereals, eggs, butter and fats, tomatoes, citrus fruits, dry beans and peas, nuts and potatoes were a possibility as early as 1947 in view of the expected disappearance of abnormal wartime demands.<sup>4</sup> Within another month, however, there had burst into public discussion reports of a new food crisis surpassing in gravity even that which had been revealed one year earlier.

### I. FOOD CRISIS AGAIN

Early in February 1946 the inter-governmental Emergency Economic Committee for Europe announced, on the basis of extensive studies, that in Europe alone, excluding the U.S.S.R.:

1. during the next few months about 100 million persons would probably be receiving an average total diet of 1,500 calories or less per person per day, while an additional 40 million would probably be receiving more than 1,500 but less than 2,000 calories daily per capita;
2. in general, current and prospective European diets were even less satisfactory in other nutritional elements and in palatability than in calories.<sup>5</sup>

On the same day, President Truman revealed that, “more people face starvation and even actual death for want of food today than in any war year and perhaps more than in all the war years combined,” and he went on to announce a nine-point food conservation program to make possible larger food shipments from the United States.<sup>6</sup> A few days thereafter the United Nations General Assembly, as the result of a resolution moved by Great Britain, the United States, France, China and the Soviet Union, “called on its 51 members to avoid the ‘catastrophe’ of world-wide

<sup>3</sup> Director of War Mobilization and Reconversion, *Fifth Report: Battle for Production*, U. S. Government Printing Office, January 1, 1946, p. 24.

<sup>4</sup> *Wall St. Journal*, January 7, 1946. The Director of War Mobilization and Reconversion later admitted that, “It had been feared that there might be price-depressing food surpluses after VJ-day, but we now know that in 1946-7 there will be need for all the food that American farmers are likely to produce.” (*Fifth Report: Battle of Production*, p. 33.)

<sup>5</sup> *N. Y. Times*, February 7, 1946.

<sup>6</sup> Winifred N. Hadsel, “U. S. Moves to Relieve Starvation Abroad,” *Foreign Policy Bulletin*, New York, February 15, 1946, p. 1.

famine and starvation by 'immediate and drastic' action to save and grow more food."<sup>7</sup>

Once more, these disastrous revelations evoked a stream of indignant attacks on the sources of past reassurances which had thus been proved unwarranted, accompanied by intemperate charges, by confusing information and by conflicting recommendations. And once again, these were succeeded in time by the clarification of feasible alternatives and by the formulation of new measures designed to alleviate the impending threats. On this occasion, however, the storm did not spend itself quite so quickly and criticisms of official policy were distinctly more denunciatory.

Although estimates were necessarily subject to frequent revisions, generally upward, the enormous scale of prospective food grain shortages was apparent almost immediately. At the General Assembly meeting referred to above, the British Foreign Secretary, Ernest Bevin, estimated that, "there is a shortage of 5 million tons of wheat and 2 million tons of rice in the supplies available to the importing countries this year."<sup>8</sup> Momentary confusion was caused the following week by the Director of the Production and Marketing Administration of the U. S. Department of Agriculture, Dr. D. A. FitzGerald, who, after reporting that during the succeeding six months the shortage of wheat would exceed 5 million tons and that of rice would approximate 6 million tons, nevertheless went on to add that the hunger problem would not be acute anywhere were it not for the shortage of railroad cars needed to move bulging stocks from interior regions to ocean ports in the U. S., Argentina and elsewhere.<sup>9</sup> With this diversion soon brushed away,<sup>10</sup> estimates of deficit realities continued to grow. The British White Paper, *The World Food Shortage*, placed deficits for the 1945-46 crop year at 8 million tons for wheat and 3 million tons for rice, and then noted that the effect of these shortages would be greatest during the first half of 1946.<sup>11</sup> For these same six

<sup>7</sup> *N. Y. Times*, February 14, 1946.

<sup>8</sup> *Ibid.*

<sup>9</sup> *N. Y. Times*, February 21, 1946.

<sup>10</sup> "At first Secretary Anderson and other Agriculture Department officials were inclined to pass the buck to the railroads. There was plenty of wheat they said, but a nationwide transportation jam made it impossible to get the grain to the seacoasts. The railroads indignantly replied that they were hauling all the wheat offered them, furnished figures to show near-record carloadings in January. The argument was swiftly resolved and made obsolete by restoration of wartime transport priorities for food (chiefly wheat), and assignment of 34,000 extra boxcars to haul it." ("The Food Scandal," *Fortune*, May 1946, p. 92.)

<sup>11</sup> Ministry of Food, *The World Food Shortage*, H. M. Stationery Office, London, April 1946, pp. 8, 10.

months, authoritative American estimates again forecast a deficit of 6 million tons of rice<sup>12</sup> and raised the expected deficit of wheat to over 10 million tons, or to one-half of the total requirements for January-June 1946 of 780 million bushels.<sup>13</sup>

The world food outlook was rendered graver still by immense shortages of other basic necessities as well. In general, meat and dairy products, while a most desirable and palatable source of needed nutrients, were so costly, were in such short supply relative to potential requirements, and in any event represented so inefficient a means of utilizing available agricultural resources, that considerations of maximizing the alleviation of hunger necessarily turned primary attention during the emergency elsewhere.<sup>14</sup> Exportable supplies of fats and oils during the crop year 1945-46 were estimated at only two-thirds of necessary import requirements,<sup>15</sup> with the greater part of this deficit to be borne during the latter half of the period. The deficit in sugar supplies was of equal proportions.<sup>16</sup> Food grains had been expected not only to play their customarily dominant role as a source of energy in European and Asiatic diets, but also to help offset the caloric deficiencies imposed by shortages of other foodstuffs. Thus, for many, it was largely the realization of staggering shortages in the very cereals which had been expected to ensure an ample filler for deficit diets that transformed what had been contemplated with comparative equanimity as a shortage of preferred but not absolutely necessary foodstuffs into the threat of widespread and desperate suffering.

Something of the consequences which loomed ahead was suggested by authoritative U. S. estimates that domestic supplies were sufficient to provide average daily per capita rations of only 1,700 calories in Czechoslovakia, 1,250 calories in France, 1,000 calories in The Netherlands and

12 Director of War Mobilization and Reconversion, *Sixth Report: Production Moves Ahead*, U. S. Government Printing Office, April 1, 1946, p. 32.

13 Bureau of Agricultural Economics, *The Wheat Situation*, January-March 1946, p. 5.

14 "In spite of the unsatisfied demand for animal foods, it is evident that the quantities of grain at present being fed to livestock are still too high, having regard to the needs of deficit countries for grain for human food. It is well known that under conditions of scarcity, the most economic use of grain is for feeding human beings direct and not for converting it through animals into meat and eggs for human food. Under normal feeding practices, for example, it needs 3½ lbs. of grain and concentrated feeding stuffs to produce one lb. of beef, 5½ lbs. to produce one lb. of eggs and 6 to 7½ lb. to produce one lb. of pig meat." (British Food Ministry's *The World Food Shortage*, p. 5.) For further discussion, see Chapter IV.

15 *Sixth Report: Production Moves Ahead*, p. 32.

16 *Ibid.*

Finland, and 900 or less in Belgium, Italy, Norway and Greece.<sup>17</sup> Miss Mary Craig McGeachy, UNRRA's Director of Welfare, reported that malnutrition and tuberculosis were of epidemic proportions among the children of Europe, and mentioned specifically that:

In Prague, they gave tests and X-rays to 70,000 school children and found that 40 percent showed signs of lung disorder. In Greece, incidence [of tuberculosis] increased four and one-half times during the war years. In Yugoslavia, the case rate and death rate doubled. In Italy, the death rate rose two and one-half times. In countries of the west, while the general figures are less startling, there are bad spots.<sup>18</sup>

India, which has been described as "perpetually in short supply of food . . . [with] nearly always some areas where a large proportion of the people are undernourished,"<sup>19</sup> was forced by a reduction of more than 7 million tons in its cereal production to register urgent need for imports of 4 million tons of wheat or rice<sup>20</sup> in order to maintain a 12-ounce grain ration per head, and thus allay not only severe hunger but violent political disturbances as well.<sup>21</sup> UNRRA reported that 30 million Chinese in 19 provinces were at the point of starvation, and that, "despite all present relief measures, it is feared four million persons will not survive unless the world food deficit should improve overnight." In Hunan Province, sometimes called the "rice bowl" of China, this report added, "Several millions are reduced to eating grass, roots, tree bark, and even clay. The countryside has been shaved clean of vegetation by both the province's natives and hunger-driven refugees on the way to Hankow." Similar con-

<sup>17</sup> *Ibid.*, p. 34.

<sup>18</sup> *N. Y. Times*, April 14, 1946.

<sup>19</sup> Office of Foreign Agricultural Relations, *World Food Shortage, 1946*, mimeographed, February 1946, p. 121.

<sup>20</sup> British Food Ministry's *The World Food Shortage*, p. 8.

<sup>21</sup> *N. Y. Times*, February 16, 1946. This report also noted that, "Last night, Pandit Jawaharlal Nehru, addressing a crowd at Benares, said that 'if people die of hunger, their deaths will be avenged.' No one can tell yet to what extent this declaration will be fulfilled but already there have been demonstrations of protest here and there over the announcement of ration cuts." In April, Secretary of Agriculture Anderson stated that, "In India, the cereal rations of urban people have been cut from 16 ounces to 12 ounces a day. Before the cut, those rations provided less than half the calories being consumed by the average American. The cut amounted to 25 percent." (Clinton P. Anderson, "World Food Needs: The Basic Picture," *Foreign Commerce Weekly*, April 20, 1946, p. 3.) On May 7, Sir Girja Bajpai, Agent General for India in the U. S., announced that the Combined Food Board's cereal allocation to India for May would be insufficient to maintain even the 9.6 ounce ration being received by 100,000,000 people in India. (*N. Y. Times*, May 8, 1946.)

ditions were also said to prevail in varying degrees in Honan and Hupeh Provinces.<sup>22</sup>

A brief review of allocations to UNRRA also helps to highlight the impact of world food shortages on some of the countries in direst need. During the last six months of 1945, according to Herbert H. Lehman's bitter special report to UNRRA prior to retiring as Director General, UNRRA shipments were sufficient to supply 84 percent of requirements for carbohydrates, 24 percent of requirements for edible fats, half of the requirements for vegetable proteins and 46 percent of requirements for animal proteins. For the first quarter of 1946, however, it was his estimate that UNRRA's shipments would only supply "about 53 percent of bread grain requirements, only 20 percent of rice requirements, and less than 4 percent of edible fat requirements."<sup>23</sup> UNRRA's frantic but vain efforts to materially expand such aid were illustrated by the report of the new Director General, Fiorèllo H. LaGuardia, about his campaign to raise April shipments of bread grains from the prospective 346,000 tons already committed by supplying countries to 646,000 tons, as compared with UNRRA's screened monthly minimum requirements of 700,000 tons. The measures taken included not only continuous negotiations with the Combined Food Board, but direct negotiations as well with the governments of Argentina, Australia, Canada, the United Kingdom, and the United States. Eventually, arrangements were made to effect the following diversions to UNRRA's April shipping account: from the U. K. shipping program for April, 60,000 tons of wheat; from Belgium, about 12,000 tons of Argentine barley; from Norway, about 7,000 tons of Canadian wheat; from Switzerland, about 16,000 tons of U. S. rye and other cereals; and from the Canadian government, an additional 75,000 tons of oats and 16,000 tons of wheat. In the meanwhile, however, deliveries were falling short of original commitments. The final results of this most energetic undertaking, and some of the conclusions to be drawn from it, were summarized as follows by Mr. LaGuardia:

Actual shipments during that month...were only 360,000 tons—a mere 14,000 tons more than was estimated when the Director General requested an additional 300,000 tons. This illustrates the major difficulty which has confronted the Administration and the receiving countries dependent upon it since its inception. The allocations made to the Administration are invariably much smaller than the screened requirements submitted by it; the com-

<sup>22</sup> *Washington Post*, April 16, 1946.

<sup>23</sup> *N. Y. Times*, March 20, 1946.

mitments to the Administration are almost invariably less than those allocations; the cargo made available to the Administration is almost invariably less than those commitments. From bitter experience the Administration has been compelled to conclude that it cannot be sure of cargo until it is safely beyond the three mile limit. . . . At the time of writing (May 6) the Administration does not know where it stands with respect to its program of May shipments of bread grains—let alone its position in June or July. . . . The Director General submits that with bread rations at such low levels and virtually no stocks, . . . it is intolerable that [the countries dependent on UNRRA] are compelled to await word from week to week on how much bread they will have to eat.<sup>24</sup>

Along with a growing awareness of the true dimensions of the world food shortage during the early months of 1946, there developed also a more realistic understanding of its probable duration. Early in February, the *New York Times* reported that informed grain traders in Chicago not only considered European food shortages “to be far blacker than admitted officially,” but that they saw little prospect of improvement for the 1946-47 crop year in Europe.<sup>25</sup> Official agreement with these lengthened perspectives was soon forthcoming from the United Nations General Assembly, whose above-noted resolution calling for “immediate and drastic action” to save and grow more food was “aimed at inaugurating a campaign to carry the world through a period of critical shortages for the rest of this year and through next winter.”<sup>26</sup> One month later, this important revision in the expected proportions of the food crisis began to enter public discussion more actively. In mid-March, Professor T. W. Schultz of the University of Chicago told the House Special Committee Investigating Food Shortages that serious supply deficiencies might be felt for the next 18 months.<sup>27</sup> On March 23, Herbert H. Lehman, retiring Director General of UNRRA, publicly charged “that neither Secretary of Agriculture Anderson nor Herbert Hoover, honorary chairman of the Famine Emergency Committee, recognized the full size of the emergency.” In reply, Mr. Anderson said that, “he agreed with Mr. Lehman that the situation next winter is likely to be bad”; and the next day a newspaper

24 United Nations Relief and Rehabilitation Administration, *Report of the Director General to the UNRRA Council on the Developments in the Food Crisis Since the Resession of the Fourth Session of the Council at Atlantic City on 29 March 1946*, Council IV Document 245, Washington, D. C., May 6, 1946, pp. 2-5.

25 *N. Y. Times*, February 11, 1946.

26 *N. Y. Times*, February 14, 1946.

27 U. S. Chamber of Commerce, *Governmental Affairs—Legislative Daily*, March 14, 1946, Section One, p. 2.

reported, as the result of an interview with an unnamed official of the Department of Agriculture that, . . . "the food problem 'will be with us into the 1947 harvest' and that Government warnings of a crisis in the next 120 days did not mean an end to the world crisis."<sup>28</sup> At the same time, the opinion was expressed by the *London Economist* that, "The world grain crisis threatens to be quite as severe next year as this, unless increased world production of at least 10 million tons is compassed this year in order to replace the stocks now being consumed and the 7 million tons which represents this year's minimum deficit in world wheat supplies."<sup>29</sup> Although the President's Famine Emergency Committee had hitherto "been considered as holding a short-term view of the world famine," its chairman, Chester C. Davis, emphasized on April 16 that, "the world food situation is becoming progressively worse and the crisis will not end when the next crop comes in" and added that, "a tight situation [was] expected at the turn of the year."<sup>30</sup> Nevertheless, these occasional glimpses of the prolonged burdens which lay ahead were heavily overlaid with official expressions of a monopolizing concern with immediacies. Even Mr. Hoover emphasized in his April 19 broadcast from Cairo that, "This present world crisis is unique amongst all crises of history. For this crisis has a definite terminal date. That date is the arrival of the next harvest."<sup>31</sup>

Further study brought additional adjustments in time perspectives. At the end of April, Secretary Anderson "warned that food shortages in this country might continue into 1948."<sup>32</sup> A report by experts of the United Nations Food and Agriculture Organization stated that, "a critical world food shortage will continue at least until crops are harvested in 1947, assuming average or even somewhat better than average weather for the rest of 1946 and 1947." Moreover, it was also felt by this agency that the world food situation was "likely to remain critical in one way or another for the next four or five years."<sup>33</sup> Simultaneously, a study was completed

<sup>28</sup> *Washington Evening Star*, March 23, 1946.

<sup>29</sup> *London Economist*, March 23, 1946, p. 448.

<sup>30</sup> *New York Times*, April 17, 1946.

<sup>31</sup> *Washington Post*, April 20, 1946. Writing before comprehensive new studies by the Department of Agriculture forced some adjustment in Mr. Anderson's views toward the close of April, the May issue of *Fortune* remarked that, "Secretary Anderson and Mr. Hoover clung doggedly to their conviction that the crisis would be over by July, when the new harvests begin to come. But few other authorities agreed with them." ("The Food Scandal," p. 95.)

<sup>32</sup> *N. Y. Times*, April 30, 1946.

<sup>33</sup> *N. Y. Times*, May 9, 1946.

by Dr. Naum Jasny of the Office of Foreign Agricultural Relations, entitled "Decline and Recovery in European Agriculture: World Wars I and II," which arrived at the following conclusions:

The decline in the agricultural production of continental Europe, during World War I, amounted to something over 25 per cent by 1919, the low point; 7 years were needed to restore it to the prewar level. An even greater decline in the U.S.S.R. had its low point in 1921-1922; prewar conditions were restored in about 6 years.

The year 1945 is likely to be the low point in European agricultural production during World War II; had climatic conditions not been so unfavorable in 1945, the decline this time would have been little, if any, greater than during World War I. Technical progress, especially in the use of tractors and fertilizer, and certain economic factors, such as planning and ability to control currencies, should permit restoration of the prewar level more rapidly than after World War I, but the political situation and certain other economic factors may prove greater handicaps. A minimum of 5 years seems to be the time needed for restoration of the prewar level.<sup>34</sup>

A few days later, Acting Secretary of State Dean Acheson warned in a public address that, "We face five years of famine," explaining that even if enough cereals should be grown in 1946 and 1947 to avert large-scale starvation, the depletion of world food stocks in order to ease the current crisis, and the serious shortage of livestock needed to produce animal products, would put off for several years more the restoration of the world food supply to a level "even equal to the unsatisfactory levels of the years immediately preceding the war."<sup>35</sup>

Still another important dimension of the world food crisis was its progressive involvement in a renewed competitive struggle for relative advantage among donors no less than among recipients. Understanding of some of the problems which lay ahead on this front was given sharp practical focus by the *London Economist's* review of the conflicting political objectives which had already thrown obstructions in the way of unrestrained common action motivated solely by humanitarian considerations:

The coincidence of the Combined Food Board's meeting in Washington with the fourth annual council meeting of UNRRA at Atlantic City has thrown into the limelight the fact that there is at present no body capable of distributing the world's inadequate supply of wheat on a basis of sheer need and without taint of politics. In Washington it has not been possible to obtain

<sup>34</sup> Naum Jasny, "Decline and Recovery in European Agriculture: World Wars I and II," *Foreign Agriculture*, April 1946, p. 50.

<sup>35</sup> *N. Y. Times*, May 14, 1946.



unanimous agreement in the commodity committee that issues recommendations to governments. One of its members, Argentina, has refused to reduce her shipments to Spain, Portugal or other countries not seriously short of food. At Atlantic City, the American intimation that there will be no more money for UNRRA in Europe after the end of 1946 is said to be a reflection of annoyance that the U.S.S.R. should be ready to supply France with 500,000 tons of grain when the needs of Poland are relatively so much greater. Again, Mr. Lehman's statement that though someone must go hungry, Italy is not among those to be sacrificed, is interpreted not as an act of necessity on behalf of a country which grows few potatoes, but as a measure of America's desire for prestige in her own zones and as a political gesture made out of consideration for the Italian minority in the States.<sup>36</sup>

Dr. Tingfu Tsiang, permanent chairman of the UNRRA Council, charged that, "not only had the Combined Food Board cut down China's rice allocations to a mere trickle of 42,800 tons, but that the British Crown Colony of Hong Kong with a half million population had received almost as much rice for the first quarter of 1946, 34,000 tons, as went to the 450,000,000 in all the rest of China."<sup>37</sup> Another widely credited report alleged that:

Some time ago, representatives of the non-Communist elements in the French government approached the British cabinet with a request for a "loan" of 150,000 tons of wheat from British reserves. The French negotiators stated bluntly that an election was coming on in France, that the loan of wheat was needed to avert a cut in the French bread ration just before the election, and that another cut in the bread ration would geometrically increase the chances of very unfortunate results at the polls. This, of course, meant that if France starved, it would go Communist.<sup>38</sup>

And in the same vein, the U.S.S.R.'s offer to sell 500,000 tons of grain to France, which was supplemented shortly thereafter by arrangements to sell 600,000 tons to Poland, Rumania and Finland,<sup>39</sup> was widely interpreted in the west as a move to strengthen Communist influence in those areas.

The U. S. government was confronted by major political problems not only in deciding how much of domestic output should be withdrawn from domestic trade and consumption in favor of exports, and in later

<sup>36</sup> From "Wheat in World Politics," *London Economist*, March 23, 1946, p. 448.

<sup>37</sup> *N. Y. Times*, March 20, 1946.

<sup>38</sup> Reported by columnists Joseph and Stewart Alsop, *Washington Post*, May 3, 1946.

<sup>39</sup> *Washington Post*, May 19, 1946.

joining with the U. K. to determine the allocation of exportable supplies among the allied and liberated areas, but also in resolving what Secretary Anderson described "as an increasing struggle for U. S. grain between the 'flag areas'—the combined occupied zones of Germany, Japan and Southern Korea, for which the U. S. is directly responsible—and our former Allies."<sup>40</sup> It seems reasonable to presume that reports such as those noting that food rations in the Soviet zone of Germany exceeded those available in the U. S. zone, and that there were "responsible" officials who felt that this unfavorable differential would "wash up our whole political effort in Germany,"<sup>41</sup> were indicative of some of the considerations underlying Secretary Anderson's further declaration that, "I must brutally recognize that more and more I have found it necessary to take care of these flag areas."<sup>42</sup>

UNRRA allocations, too, lent themselves to charges that political considerations had at times crept in to modify nutritional standards of need. Thus, while UNRRA Director General Lehman was explaining the diversion to Italy of 8 ships bound for Yugoslavia, Greece and Czechoslovakia, on the grounds that Italy's "caloric intake was at the bottom of Europe's list,"<sup>43</sup> the *N. Y. Times* was reporting, on the basis of a special survey of the food situation in Europe, that, "The statement of the U. S. agricultural attache in Rome that Italy has the worst wheat shortage in the world would, however, be vigorously disputed by Greece, where actual starvation is now being reported from some sectors; in eastern Czechoslovakia, where the people are wasting away from hunger, and in much of Yugoslavia and Poland."<sup>44</sup> The underlying problem suggested by instances such as the foregoing was summarized by *Fortune* as follows:

The political aspect of the food crisis is heightened by tension and suspicion between Russia and the U. S. and Britain. Charges and countercharges of the use of food as a political weapon have been hurled back and forth. The governments of such Russian-dominated countries as Poland, Czechoslovakia and Yugoslavia have complained that they were getting proportionately less UNRRA food than such ex-enemy states as Italy and Austria. (UNRRA explanation: Italy and Austria have never been self-sufficient in food, while the Soviet-dominated nations of eastern Europe were food exporters before

40 *N. Y. Times*, May 27, 1946.

41 Reported by columnists Joseph and Stewart Alsop, *Washington Post*, May 3, 1946.

42 *N. Y. Times*, May 27, 1946.

43 *N. Y. Times*, March 20, 1946.

44 *N. Y. Times*, March 18, 1946.

the war and hence can be expected to produce more of their own supplies.) Russians demand that UNRRA stop feeding anti-Soviet refugees who refuse to return to their native countries. The U. S. and Britain retort that UNRRA food is being used to bolster Communist regimes in the Russian spheres.<sup>45</sup>

## 2. CAUSES AND REMEDIAL MEASURES

Contrary to many of the hastily contrived official excuses, the food crisis of 1946 was far from being a sudden, unexpected and unavoidable phenomenon, wholly explicable as a product of freakishly adverse weather. Droughts in the Mediterranean Basin, in the grain-producing regions of the Southern Hemisphere and in India served but to intensify the substantial shortages already ensured<sup>46</sup>—first, by the wartime destruction and dislocation of agricultural resources; second, by the extreme disorganization of economic relationships in the liberated as well as the defeated countries; and third, by the intensification of deteriorative trends in these areas as a result of the failure of exporting nations both to truly maximize their wartime production and to restrain unnecessary gains in average domestic civilian consumption levels in order to accumulate stock-piles commensurate with anticipated overseas needs.

As an emergency envisioned with more than reasonable accuracy long before its advent, the post-war food shortage represented a problem in planning not only co-ordinate but integral with the over-all wartime strategy, which was directed not only toward military victory but also toward the promptest possible consolidation of a sound peace. Had the agricultural sector of strategic planning been prosecuted with the vigor, determination and effectiveness which characterized military planning for effectuating a triumphant conclusion to the war, resultant policies and preparations would have made it possible not only to cope with the unexpected, weather-induced production decrement in the 1945-46 crop year with immeasurably greater success, but also to sharply contract the period of rehabilitation instead of contributing to its prolongation. In addition to proving that wartime agricultural planning had been seriously ineffective, however, the events of 1946 also helped to highlight some of the major factors responsible for such grievous shortcomings.

This country's inability to contribute more fully to the hungry peoples overseas during the first half of 1946 had three primary roots: the failure

<sup>45</sup> "The Food Scandal," *Fortune*, May 1946, p. 95.

<sup>46</sup> Among other similar conclusions may be noted the following: "Even with good weather last year, a large part of the world's people would now be hungry. The weather has only magnified man-made disaster." ("The Food Scandal," *Fortune*, May 1946, p. 89.)

to maintain pressure for all-out production during 1945; the expansion of domestic civilian consumption instead of its reduction materially below 1944 levels; and the continuation of the long-encouraged over-expansion of livestock production, with its attendant costly demands both for the diversion of cropland from food crops to feed crops and also for the diversion of large wheat supplies from the feeding of humans to the feeding of animals. The first of these misguided policies traces back directly to the winter of 1944-45, when 1945 production goals were being formulated in the shadow of imagined surpluses. While the second can be traced back even further, the more immediate point is that it was directly reaffirmed through the progressive relaxation of rationing during the latter half of 1945, in the very midst of cries of hunger from abroad.<sup>47</sup> While the third of these questionable policies has a longer history than either of the others,<sup>48</sup> it, too, was reaffirmed both directly and indirectly during 1945, for the relative attractions of raising feed crops as compared with food crops, and the relative attractions of marketing grain directly as compared to feeding it to livestock, are extremely sensitive to the price differentials which were kept favorable to livestock production; and the direct incentive toward this same end engendered by the official decision to terminate meat rationing need hardly be elaborated.

In 1946, as in 1945, one of the most striking characteristics of leadership in the food crisis was the startling contrast between official pronouncements (fervently warning of impending calamities and both demanding and promising heroic counter-measures) and actual official

<sup>47</sup> "Last August, when President Truman returned from the Potsdam Conference, he described the European food situation in his radio report to the nation, and declared: 'We must help to the limits of our strength, and we will.' Yet in spite of this pledge, no restrictive measures designed to ensure its fulfillment were adopted. On the contrary, lend-lease—on which many Allied countries whose economies had been badly disrupted by the war depended for basic food supplies—was abruptly terminated on August 21, and most of our food rationing controls were lifted within 3 months after V-J Day." (Winifred N. Hadsel, *op. cit.*, p. 1.)

<sup>48</sup> "Many a voice was raised during the war to prophesy inevitable famine at war's end, to warn that the U. S. Government could not possibly keep its grand promises of hunger relief unless governmental policy were changed. *Fortune*, in June 1943, was only stating the obvious when it reported: 'We are concentrating a large part of our agricultural production on relatively costly livestock products.... In fact, in a world accustomed to eating grain and beset by the lack of it, we seem to be pursuing a will-o'-the-wisp high standard of living that neither we nor our allies can afford, and that we haven't the remotest chance of maintaining if we are serious in our intention of feeding others.' Yet government officials continued their policy of encouraging farmers, by price differentials, to feed their grain to livestock instead of saving it against post-war famine. And the currently responsible officials apparently intend to go right on making the same mistake." ("Let Them Eat Grass?" *Fortune*, May 1946, p. 85.)

remedial efforts (which seemed to reflect a consistent devotion to patently minor and peripheral measures, while stubbornly resisting all demands for alterations in the basic policies which were daily contributing to shortcomings in performance).

The first series of measures designed to overcome this country's continued failure to fulfill its export pledges were directed toward food conservation, with particular emphasis on releasing additional wheat for overseas shipment. Its major components were: a requirement that millers increase the proportion of flour ground from wheat from the current 70-72 percent to 80 percent;<sup>49</sup> a prohibition on the use of wheat for the production of alcohol, spirits and beverages;<sup>50</sup> the introduction of limitations on the use of wheat by manufacturers of livestock feed;<sup>51</sup> and the initiation of a vigorous information campaign, under the direction of the President's Famine Emergency Committee, to promote voluntary reductions in food consumption, especially in respect to bread and other wheat products. Estimates of the possible savings that might be derived from these measures during the first half of 1946 varied between 25 million and 45 million bushels of wheat,<sup>52</sup> as compared with the 225 million bushels that the U. S. had committed itself to export during that period. The major sources from which the remainder had to be sought is apparent from the following summation by the Bureau of Agricultural Economics:

If the use of wheat for feed and seed during the January-June period is held to about 90 million bushels, and if the July 1 carry-over of wheat could be reduced to 150 million bushels, the lowest since the drought years, 440 million bushels would remain for U. S. consumption and for export. If consumption as food by U. S. civilians and armed forces takes around 250 million bushels, as now indicated, only 200 would remain for export even under the most favorable conditions.<sup>53</sup>

Here was outlined by a reputable authority not only the probable inadequacy of the measures which had yet been taken but also the particular

49 *War Food Order 144*, effective February 18, 1946.

50 *War Food Orders 66 and 141*, amendments issued February 11, 1946.

51 *War Food Order 144*.

52 For example, see *The National Food Situation*, February-March 1946, p. 14; *Sixth Report: Production Moves Ahead*; "The Food Scandal," *op. cit.*, p. 91. After making some estimate of possible savings from wheat conservation measures, *The National Food Situation* statement just cited goes on to suggest that hoarding and speculative holdings might offset some of the expected gains.

53 *The National Food Situation*, February-March 1946, p. 14.

"if's" to which government policies would have to be addressed in order to ensure a more fruitful return. Rephrased as questions, the further potentials thus emphasized were: how can the domestic consumption of wheat for food be reduced? what can be done to curtail or discourage the farm feeding of wheat to livestock? and by what means can farm holdings of wheat be substantially decreased?

As deeds continued to fall short of promises, the tenor of public discussion began to change, tempers began to grow short, and pleas for unstinted public co-operation began to be replaced both by demands on the government for greater achievement and by increasingly vehement attacks on current policies.

The first major critical outbursts were precipitated by the fact that actual U. S. wheat shipments during January and February together with scheduled exports for March totalled only 100 million bushels,<sup>54</sup> thus falling more than 10 percent short of committed goals, while shipments of other foodstuffs, too, continued to lag behind pledged rates of aid.<sup>55</sup> On March 19, in a special report to the UNRRA Council, Director General Herbert H. Lehman delivered a strong attack on the inadequacy of the measures which had been taken by the U. S. government to fulfill its promises. In regard to the voluntary rationing programs sponsored by Herbert Hoover and by the President's Famine Emergency Committee, Mr. Lehman said:

I feel compelled publicly to declare that neither I nor my associates in UNRRA have much confidence that we can depend on voluntary measures alone to move to the hunger zones in time the supplies of grain which are known to be physically available.... Voluntary measures alone, no matter how energetically they are pursued, are not enough. They can be helpful, but, after food has moved into civilian consumption channels, it is too late to recapture it for shipment abroad.... Far more drastic measures are necessary.<sup>56</sup>

Among the positive recommendations put forward, which were suggestive of what he considered to be other shortcomings in current American food policy, Mr. Lehman included not only the rationing of foods in short supply and the re-introduction of government set-aside orders "to ensure that the supplies needed will be on hand when needed," but also proposals to expand production, to cut down the "grain-reducing livestock popula-

<sup>54</sup> *Ibid.*

<sup>55</sup> For example, meat shipments during the first quarter of 1946 fell 25,000 tons short of the 250,000 ton export goal for that period. (*N. Y. Times*, April 7, 1946.)

<sup>56</sup> *N. Y. Times*, March 20, 1946.

tion," especially pigs and poultry, to add the U.S.S.R. to the Combined Food Board, and to make this body's decisions public.<sup>57</sup> Concerned by repeated failures to supply UNRRA's urgent requirements, representatives of 21 food, religious, consumer, labor and other organizations jointly urged President Truman to issue executive orders incapable of misinterpretation which would direct that, "priority be given to UNRRA for the maximum quantity possible of unprocessed wheat, grain and other essential foods for whatever period is necessary to prevent death from famine and disease in the nations served by UNRRA."<sup>58</sup> A few days later Henry Morgenthau, Jr., former Secretary of the Treasury and one-time Governor of the Farm Credit Administration, called on the President to decry the inadequacy of Mr. Hoover's voluntary wheat conservation program and to propose that production be increased, that mills be directed to set aside for export 25 percent of all flour produced, and that carry-over stocks be reduced to 100 million bushels in place of the planned 150 million bushel July 1 level.<sup>59</sup> On April 1, Congresswoman Emily Taft Douglas of Illinois submitted, in vain, a House Concurrent Resolution urging the President "to institute a system of Nation-wide food rationing for those commodities of which there is a marked world deficit."<sup>60</sup> Later in that week, Pope Pius XII, after calling attention to "the sinister menace of hunger," suggested "that a small, scarcely noticeable rationing in the better supplied countries would result in such saving of food as would afford other peoples, harder hit by famine, a marked relief in their urgent needs."<sup>61</sup>

Soon, new information came to light rendering the outlook even bleaker. A report in the *N. Y. Times* offered the following comments in summarizing the progress of the "super-colossal" program of the Famine Emergency Committee:

The United States had at least gone through the motions of answering the obligation of a humane people to help feed the world's hungry but by this week there was evidence that the promise could not be fully kept. . . . Although one of the most high-powered campaigns ever conducted by a com-

<sup>57</sup> *Ibid.* The significance of Mr. Lehman's suggestion to expand the membership of the Combined Food Board lay in the politically explosive fact that this was the agency "which decides who shall starve and how badly," to use the phraseology of Joseph and Stewart Alsop in the *Washington Post*, May 3, 1946.

<sup>58</sup> *Ibid.*

<sup>59</sup> *Washington Evening Star*, March 29, 1946.

<sup>60</sup> *House Concurrent Resolution 140*, 79th Congress, 2nd Session, April 1, 1946.

<sup>61</sup> *N. Y. Times*, April 7, 1946.

bination of Government, trade and interested citizens had started off in a blaze of glory and publicity, the food targets for March will be missed by more than 10 percent...the hope of reducing the consumption of wheat products by 40 percent among Americans who scorn starchy foods was fast dissolving. The Famine Emergency Committee, which runs the conservation program, also wants Americans to cut their consumption of fats and oils by 20 percent, but as yet, say the committee's observers, there is no indication that anything like 20 percent will be saved.<sup>62</sup>

Nevertheless, the first half of April found the Office of War Mobilization and Reconversion releasing official estimates indicating that per capita food consumption in the U. S. during 1946 would be several percent greater than the previous all-time record,<sup>63</sup> while the Bureau of Agricultural Economics was explaining that, "domestic demand for meats, dairy products, fats, sugar and wheat is so great in relation to supplies that procurement of these foods for export is very difficult in the absence of wartime restrictions on purchases by domestic consumers."<sup>64</sup> Then, on April 25, the Department of Agriculture revealed that wheat exports during the first 20 days of April had fallen 198,000 tons short of U. S. commitments, thus bringing the total gap between official pledges and actual exports since the beginning of the year to 512,000 tons, or 14 percent of the 3,667,000 tons due up to April 21. Moreover, the gap was officially attributed primarily to the unexpectedly large milling of flour for domestic consumption and to the continued heavy feeding of wheat to livestock.<sup>65</sup>

In spite of the weighty positive arguments which had thus been adduced in favor of more fundamental measures for controlling domestic food consumption and the utilization of farm supplies of wheat, however, and in spite of the supporting arguments provided by the continued failure to meet export commitments, official action continued to lean heavily on emotional appeals and on essentially peripheral expedients. In a widely publicized radio broadcast on April 19, President Truman said:

We cannot ignore the cry of hungry children. Surely we will not turn our backs on the millions of human beings begging for just a crust of bread. The warm heart of America will respond to the greatest threat of mass starvation in the history of mankind.... America is faced with a solemn

<sup>62</sup> *Ibid.*

<sup>63</sup> *Washington Post*, April 15, 1946.

<sup>64</sup> *The National Food Situation*, February-March 1946, pp. 2-3.

<sup>65</sup> *Washington Post*, April 26, 1946.



obligation. Long ago we promised to do our full part. The time for talk has passed. The time for action is here.<sup>66</sup>

Moving appeals were also made by Herbert Hoover and by UNRRA Director General LaGuardia.<sup>67</sup> At the same time, Secretary of Agriculture Anderson announced the issuance of directives restricting the use of wheat in the production of flour and other foods for domestic use to 75 percent of the 1945 level, and also offered a government bonus of 30 cents per bushel above market price for grain brought in from the farms.<sup>68</sup> When the April shortcomings in exports were revealed just six days later, Secretary Anderson again responded with a vigorous statement:

There is no cause at all for optimism. At the same time, there is no cause for dismay. We cannot afford to be dismayed. We must tighten our belts and fight all the harder to reach our export goal. We must feed sharply less wheat to livestock—much higher than normal feeding in recent months is largely responsible for the present tight situation. We must eat less; we must break loose every single available bushel of wheat in any storage position. The job still can be done, if every single drastic measure to conserve grain and move wheat into export channels is followed through relentlessly to a successful conclusion.<sup>69</sup>

Although Secretary Anderson was thus in close agreement with most observers in regard to where the additional wheat for export had to come from, his conception of the uttermost limits of "drastic" action continued at variance with that held by many others, for he proposed no additional measures to help effectuate the goals to which he expressed such complete dedication. Continued shortages in exports provided objec-

<sup>66</sup> *Washington Post*, April 20, 1946.

<sup>67</sup> At one point, for example, Mr. Hoover noted, "A few days ago I stated as a rough estimate that there were 20 million subnormal or diseased children on the continent. My able and esteemed colleague, who had gone to the bottom of this single problem in our trip through Europe insists that my estimate was too low. He points out that there are 11,000,000 orphans and half-orphans alone. He also points out that the mortality among children under 2 years of age is already over 250 in 1,000." Mr. Hoover also revealed that even shipments 10 percent greater per month than current U. S. commitments would provide only enough food, together with aid from other exporting areas, to maintain average European consumption at "the grim and dangerous" level of 1,500 calories per day. (*Ibid.*) For Mr. LaGuardia's statement, in which he contended that "distress will continue for a long time," in contrast to Mr. Hoover's assurance that the crisis would end with the arrival of the next harvest, see White House news release, April 19, 1946.

<sup>68</sup> *Washington Post*, April 20, 1946.

<sup>69</sup> *Washington Post*, April 26, 1946.

tive evidence of the inadequacy of the initial measures which had been taken, including the modest increase in the flour extraction rate, the prohibition on wheat consumption in the production of alcohol, spirits and malt beverages, the imposition of restrictions on the use of wheat by feed manufacturers, and the introduction of the voluntary rationing campaign. New restrictions were placed on the purchase and use of grains by livestock feeders and certain other users, which became effective on April 1, but this order related mostly to corn and sorghum grains and even failed to extend to wheat the limitation which was placed on livestock feeders' inventories of corn.<sup>70</sup> Of course, a fair appraisal of the effects of the new measures announced on April 19 could not be made at once, but field reactions within the first two weeks were far from encouraging in respect to the efficacy of the bonus offer as a means of drawing excess farm stocks of grain to market. Thus, although response to this plan was reported by the Department of Agriculture on April 25 as "immediate and enthusiastic,"<sup>71</sup> a wider summary of opinion 10 days later projected a somewhat less hopeful outlook:

Three sources indicate that the optimistic ballyhoo about the Anderson-LaGuardia visit [to Fargo, N. D. and to Climax, Minn. to personally plead with farmers to market their grain under the bonus plan] was unjustified. A *Minneapolis Tribune* reporter, in a survey in Stark County, N. D., found farmers "not too interested" in the 30-cent bonus offer, because they expect prices to rise further. The Minneapolis correspondent of the *N. Y. Times* reported that Anderson and LaGuardia "discovered quickly . . . that more than an emotional appeal would be needed to get the wheat moving." The (*N. Y.*) *Times* Monday morning weekly survey of the grain markets in Chicago showed cash wheat the tightest it has been in years. It said the farmers have not been enthusiastic about the 30-cent bonus.<sup>72</sup>

Nevertheless, the sole additional undertaking at the time which was designed to further enlarge the flow of exports was distribution by the Department of Agriculture of "real life movies of starvation conditions overseas, including two films entitled 'Freedom and Famine' and 'Suffer Little Children.'"<sup>73</sup>

And as the stream of unfavorable evidence grew, criticism, too, gained powerful momentum and a sharpened edge. On April 15, *The Newspaper*

<sup>70</sup> *The Feed Situation*, February-March 1946, p. 9.

<sup>71</sup> *Washington Post*, April 26, 1946.

<sup>72</sup> *The Newspaper PM*, May 5, 1946.

<sup>73</sup> *Washington Post*, April 26, 1946.

*PM* editorially pronounced current food policies "disastrously unsound," and joined in support of widely-expressed demands for compulsory rationing, for immediate set-aside orders, and for "drastic steps to reduce livestock herds."<sup>74</sup> On April 26, Acting Secretary of State Dean Acheson called for rationing and also for more drastic measures, including government seizure, to withdraw wheat from private holdings.<sup>75</sup> At the end of the month, in a memorably critical article entitled "The Food Scandal," and in an accompanying editorial entitled "Let Them Eat Grass?," the magazine *Fortune* termed the U. S. famine relief effort to date "a national disgrace"<sup>76</sup> and charged that "political cowardice and public waste" had made this country "welsh on its promises to a hungry world."<sup>77</sup> After recalling Mr. Anderson's shocking formulation of the role of the U. S. in the world food crisis ("Some people are going to have to starve, said the U. S. Secretary of Agriculture to a congressional committee. We're in the position of a family that owns a litter of puppies: we've got to decide which ones to drown."),<sup>78</sup> *Fortune* asked, "Why, after five successive years of extraordinarily good weather and the greatest crops in its history, was the U. S. apparently unable to spare more from its abundance?" In reply, the following conclusions were offered:

Now the fog was dispelled, the truth stood clear. The U. S. was short of wheat in a time of world famine because the U. S. government had deliberately planned for scarcity. By manipulating price ceilings and subsidies, the government had made it more profitable for farmers to turn their grain into meat than to sell it for bread and other uses...<sup>79</sup>

The great increase in the use of wheat as livestock feed was undoubtedly spurred by the wartime succession of bumper crops that overflowed the wheat elevators and left no place for the grain to be stored. And the frost that softened much of the nation's corn crop last autumn forced farmers to use wheat as a supplemental or substitute feed. But far stronger and continuing motives were the U. S. fear of abundance, the fear of surpluses, and a strong political desire to please farmers and a meat-hungry public...<sup>80</sup>

Many a close student of the problem, skeptical of the Truman-Hoover volun-

<sup>74</sup> *The Newspaper PM*, April 15, 1946.

<sup>75</sup> *N. Y. Times*, April 30, 1946; *The Newspaper PM*, May 5, 1946.

<sup>76</sup> *Fortune*, May 1946, p. 85.

<sup>77</sup> *Ibid.*, p. 89.

<sup>78</sup> *Ibid.*, p. 89.

<sup>79</sup> *Ibid.*, p. 92.

<sup>80</sup> *Ibid.*, p. 92.

tary savings program, believed that the U. S. could meet its relief commitments only by taking some 40 percent of the wheat supply at the elevators. But as the Stanford Food Research Institute observed: "By the time the full magnitude of the food deficits in Europe and the Orient became known and publicly admitted, it was too late to meet these deficits without some inconvenience to American millers, feed manufacturers, grain dealers, livestock raisers, consumers of flour and bakery products." That is no small array of political influence . . . <sup>81</sup>

In sum, Washington has been clearly lacking in the political courage required to admit that its grain-meat policy was mistaken, that it had gambled against the chances of world famine and lost, that it had abolished food rationing too soon, that in its efforts to please farmers and the ration-weary, meat-hungry public it had made excessive commitments, that drastic emergency action comparable to the efforts of the war would be required to avert a world disaster . . . <sup>82</sup>

. . . To save as many lives as possible will require precisely what President Truman promised: "Help to the limits of our strength." If official conceptions of those limits had been the same during the war as they now seem to be, there would be a Nazi or Japanese boss in every state capital and city hall in the U. S. <sup>83</sup>

At a press conference on May 2, President Truman reaffirmed his confidence in current food policies, newspaper reports emphasizing the following of his views:

He sees no necessity, he said, to return to rationing unless the Nation should suffer a disastrous crop failure. . . . The heart of the American people will have to solve the world food crisis without resort to compulsion. . . . No new food conservation measures are contemplated, he told his hearers, because he had made effective all such rules he could think of. . . . Further, he sees no need for the Government to seize wheat held for higher prices. . . . In answer to a question as to his agreement with . . . Secretary Anderson's proposal Wednesday for early abandonment of price controls on meat if present measures to halt black market sales fail . . . the President answered with a short affirmative. <sup>84</sup>

Five days later, the Department of Agriculture reported that total wheat and flour equivalent exports had declined from 1,047,000 tons in January to 892,000 tons in February, to the same level again in March, and then

<sup>81</sup> *Ibid.*, p. 92.

<sup>82</sup> *Ibid.*, p. 94.

<sup>83</sup> *Ibid.*, p. 86.

<sup>84</sup> *Washington Post*, May 3, 1946.

to 625,000 tons in April—the four months' total coming to 3,269,000 tons in comparison with a goal of 4,000,000 tons—and attributed this reduction to the "scarcity of market supplies."<sup>85</sup> On the same day, after assailing the decrease in wheat and flour exports during the first week of May to 100,000 tons, as compared with the weekly goal of 250,000 tons, Acting Secretary of State Dean Acheson, who had already proposed the requisitioning of wheat for famine relief, also called attention to the fact that the problem was not one of shipping but of getting the wheat to be shipped.<sup>86</sup> And on that same day, too, Secretary Anderson admitted that it would be "extremely difficult" to meet the export goals set for the remaining two months of the crop year.<sup>87</sup> One day later, in the face of long-expressed official arguments that a restoration of food rationing was impracticable because the 3-4 months needed to effectuate such controls would also see the termination of the food crisis,<sup>88</sup> the United Nations Food and Agriculture Organization added its weight to the body of informed opinion emphasizing that the crisis would continue for a long time beyond the approaching harvest period.<sup>89</sup>

Under the stimulus of these revelations, and of others of a similar nature, the month of May saw the tide of intensified criticism launched by *Fortune* rise to a thunderous crescendo. On May 2, James G. Patton, president of the National Farmers Union, delivered an immoderate attack on the Secretary of Agriculture, blaming Mr. Anderson as being "principally responsible for the failure of the U. S. to produce enough and procure enough food to fulfill its responsibilities abroad," and calling for his dismissal.<sup>90</sup> On May 8, the *N. Y. Times* charged editorially that, "This nation is not doing what it could do and should do to fight the worst famine in history," and, recalling the President's fervent radio broadcast of three weeks earlier, went on to observe that:

We are manifestly not living up to our "solemn obligation." We are, in fact, turning our backs on "the millions of human beings begging for just a crust of bread." This is not because "the heart of America" is not warm—Presi-

<sup>85</sup> *N. Y. Times*, May 8, 1946.

<sup>86</sup> *Ibid.*

<sup>87</sup> *Ibid.*

<sup>88</sup> For example, the *Washington Post* on May 13, 1946 still noted that, "Government officials have steered clear of committing themselves publicly for rationing in line with Mr. Truman's position that it could not be put into effect in time to do any good."

<sup>89</sup> *N. Y. Times*, May 9, 1946.

<sup>90</sup> *Washington Post*, May 3, 1946.

dent Truman was right about that. . . . There has been a failure of clear thinking and of leadership. There has been a failure of accurate information. What could the public conclude last month when the President said on the 12th that the world food situation was improving materially and on the 18th that it was "worse than it had been painted?"

Noting the continued decline in wheat exports during April, and the "even worse lag . . . in the export of fats," the *Washington Post*, on May 9, included the following comments in an editorial entitled "Promise, Performance":

It is time that the President looked at the record in the light of his recognition of the "solemn obligation" we have undertaken in meeting "the greatest threat of mass starvation in the history of mankind." He will find something amiss with the smooth assurances of the head of his Department of Agriculture. Mr. Anderson, indeed, is Pollyana. At successive press conferences for a long time past he has felt highly encouraged. On April 28 he spoke about "a springtime flood of wheat to the elevators." On May 2, "showing more optimism than he has at any time since the famine relief program reached its critical stages," he again expressed his confidence that goals would be met in the coming few weeks. . . . The fact is that for some time back he seems to have kept the President primed with an optimism which has no basis in fact.

. . . Many suggestions have been offered to the President by men who have never shared Mr. Anderson's optimism. Mr. Acheson asks both requisitioning and rationing—on the assumption, justified by all observers, that the emergency is no 90-day run, but will continue. . . . Surely the problem can be solved by administration.

On the part of the American people there is no indifference to the fate of the starving. They are eager to help. They are anxious to save. But they can express their fellow-feeling only if leadership is provided by the government. Judging from our information, they are heartily ashamed of our lagging performance, and troubled by the chaff of tall talk which we are mixing with the food we are sending abroad.

Two days later, Director General La Guardia was reported to have revealed that, "No fats or rice and only one-third of the grain necessary to meet minimum relief requirements were available for shipment by UNRRA in the week ended May 6," and that the inadequacy of prospective grain shipments in May "had compelled Vienna to reduce its rations to 867 calories daily and had induced the Polish government to divert 20,000 tons of this year's seed grain for human consumption . . . which

would reduce spring planting in Poland by 242,000 acres.”<sup>91</sup> On that same day, “a committee of 100, among them the former UNRRA Director General, Herbert H. Lehman, wrote President Truman urging him to use his war powers if necessary to requisition enough foodstuffs to enable the U. S. to double its commitments for famine relief in this quarter.” Adding that the public was “more than ready to accept food rationing in support of increased exports to famine areas,” and also suggesting the possibility of using for that purpose the spare coupons in the sugar ration books already in consumer hands, the committee’s letter declared, “Unless our government acts with great courage and determination during the next four to six weeks, we in America will not have done half as much as we could have done and millions will die or be blighted for life because of our failure.”<sup>92</sup> And on May 13, after recalling Secretary Anderson’s opposition to rationing on the grounds that the emergency would soon be over, and also his disregard of Mr. Acheson’s call for requisitioning, despite the fact that farm stocks of wheat were estimated at 5,300,000 tons, *The Newspaper PM* editorially charged that:

Anybody can make mistakes, but Anderson has been making nothing but mistakes since he became Secretary of Agriculture last year and prematurely lifted rationing. All of his mistakes have been of the same kind: the kind that benefits farm and processor interests at the expense of wise planning and human need.

The result is to increase hunger abroad and to stimulate the black market at home. We need rationing to cope with both...

In spite of the deplorable record, however, and despite the vast outpouring of criticism which has only been suggested by the variety of sources cited above, and even though Mr. Anderson himself belatedly avowed agreement with other critical contentions put forward by opponents of his program,<sup>93</sup> our basic food policies remained unaltered.

<sup>91</sup> *N. Y. Times*, May 12, 1946.

<sup>92</sup> *Ibid.*

<sup>93</sup> “Describing the food outlook [in a broadcast over the Columbia radio network], Anderson reported ‘every indication that the world food shortage will continue until the 1947 harvest.... There should be temporary relief of the critical famine situation near the end of the summer when European grain harvest is completed, but the relief will be only temporary.... We must make a choice between feeding starving people and maintaining our livestock numbers at record levels. Our choice, obviously, must be in favor of people.... [Americans must] face the fact that several times as many people can be fed directly with grain as can be fed if the grain is converted into livestock products even though it means less meat and poultry.’” (*Washington Post*, May 13, 1946.)

## 3. RESULTS AND FUTURE PROSPECTS

Actual U. S. exports of wheat and flour during the first 6 months of 1946 came to 190 million bushels, or to 85 percent of this government's pledged goal of 225 million bushels. In addition, however, about 15 million bushels of corn and corn products were shipped against wheat commitments reducing the remaining deficit to 20 million bushels.<sup>94</sup>

But performance relative to foreshortened goals can hardly be considered a true measure of the shortcomings in the wartime food policies which were supposed to maximize this country's capacity to provide the food resources necessary to hasten economic rehabilitation in the countries which were tragically impoverished and disorganized in the course of the war. In respect to wheat contributions toward this end, some basis for appraising what might have been our practicable potentials is provided by a brief review of wartime changes in the supply and utilization of this crop in the U. S.<sup>95</sup>

The initial conception held by the makers of food policy regarding the prospective role of wheat in the wartime food program is suggested by the fact that the government's goals for wheat acreage were lowered each year through 1943 before this trend was finally reversed.<sup>96</sup> Actual production, however, followed a more salutary course, increasing from 813 million bushels in 1940-41 (the wheat crop year begins July 1) to an average of 920 million bushels during the next three years, and then setting successive new all-time records for this country of 1,072 and 1,123 million bushels respectively in 1944-45 and 1945-46.<sup>97</sup> Moreover, these vast supplies were supplemented through imports of 136 million bushels in 1943-44 and of 42 million bushels in 1944-45. Nevertheless, carry-over stocks (July 1 basis) followed a grievously different pattern, mounting rapidly from 280 million bushels in 1940 to an unprecedented peak<sup>98</sup>

94 *The Wheat Situation*, June-July 1946, p. 6.

95 Except where specifically noted otherwise, the wheat statistics used in this paragraph and the next are from *ibid.*, p. 11.

96 For wheat acreage goals, see Table 11.

97 The only previous one billion bushel wheat crop in this country had been harvested in 1915, when total production came to 1,008 million bushels. For wheat production, 1899-1941, see *Agricultural Statistics—1942*, p. 9.

98 Between 1910-11 and 1928-29, carry-over stocks of wheat never exceeded 250 million bushels and, with the exception of 1916, remained appreciably below 200 million bushels. During the early 1930's, such stocks rose to a record of 380 million bushels. (C. P. Heisig, E. R. Ahrendes and Della E. Merrick, *Wheat Production in War and Peace*, mimeographed, Bureau of Agricultural Economics, May 1945, Figure 12—opposite p. 22.)



of 632 million bushels in 1942, only to decline almost as sharply thereafter, returning to the 1940 level by mid-1945. Thus, our wheat stocks had been of greatest proportions in the first year of U. S. participation in hostilities, when special war needs for this commodity were still at low ebb, and they had been reduced to minimal proportions by the time victory released an engulfing tide of urgent requirements.

The most important wartime change in the patterning of wheat distribution was the enormous increase in the quantities fed to livestock. Utilization of wheat for seed dropped from 74.3 million bushels in 1940-41 to 62.3 million bushels in 1941-42 and then rose steadily, with the progressive expansion of planted acreage,<sup>99</sup> to a peak of 82.1 million bushels in 1945-46. Industrial consumption of wheat, primarily in the production of industrial alcohol, rose from 0.1 million bushels in 1940-41 to 108.8 million bushels in 1943-44 and, after declining to 82.3 million bushels in 1944-45, contracted sharply to 21.0 million bushels in 1945-46—this last being attributable largely to reductions in need but also partly to the restrictions which were noted earlier. The use of wheat for food, including allocations to the armed forces as well as domestic civilian consumption, increased uninterruptedly from 478.5 million bushels in 1940-41 to 549.6 million bushels in 1944-45 and then declined by 10 percent to 495.0 million bushels in 1945-46, under the combined influence of reductions in the size of the armed forces, of the voluntary rationing program, and of the limitations applied to milling. Consumption of wheat by livestock rose from 121.6 million bushels in 1940-41 to four times that amount, or 486.5 million bushels, in 1943-44. Forced downward thereafter by the rapid depletion of available stocks, such feeding nevertheless accounted for 297.9 million bushels in 1944-45, and, despite the presumably intensive campaign to maximize wheat exports, actually increased in 1945-46 to 320.5 million bushels. Total wheat exports, including military exports for relief together with shipments to the U. S. possessions, declined slightly below the 1940-41 level of 37.1 million bushels during the next two years before rising to 66.1 million bushels in 1943-44, to 139.6 million bushels in 1944-45, and to 385.8 million bushels in 1945-46.<sup>100</sup>

<sup>99</sup> For wartime wheat acreage, see Table 11.

<sup>100</sup> In view of earlier references to UNRRA's difficulties in acquiring needed supplies of grain, the following summary of results for 1945-46 should be noted: "In the seven countries mentioned [Greece, Czechoslovakia, Yugoslavia, Albania, Poland, Italy and Austria], the 1945 output of cereals was 21.2 million tons below prewar; UNRRA's cereal imports into these countries from July 1945 through June 1946 amounted to 2.6 million tons, while cereals supplied by the U.S.S.R., the United States

Subtracting total imports of 180.9 million bushels during the four years ending in mid-1946, it is apparent that total net exports during that period came to 445.1 million bushels of wheat, or not quite as much as was fed to livestock in the single year 1943-44. Two other summary observations may be suggested:

1. Of all wheat allocated in excess of domestic food, seed and industrial uses between mid-1942 and mid-1946, two-thirds went to livestock feeding and only one-third to the relief of hungry peoples overseas;
2. If the feeding of wheat had been restrained throughout the war to the level prevailing in 1940-41, 913 million bushels or more than 27 million tons would have been saved—enough to have made possible net exports three times as great as were actually shipped between mid-1942 and mid-1946.

Although it would lie beyond the purposes of this study to pursue the detailed examination of overseas food requirements and of related domestic policies beyond the first post-war year, it may be of interest to append a brief review of food allocations for the whole of the calendar year 1946 as well as a few evidences of the continuance of serious world food shortages thereafter.

According to the preliminary estimates of the Bureau of Agricultural Economics,<sup>101</sup> U. S. civilian per capita food consumption in 1946 exceeded the all-time record of 1945 by nearly 4 percent, thereby verifying the official expectations revealed by the Office of War Mobilization and Reconversion on April 14, 1946,<sup>102</sup> near the height of the vain campaign for the imposition of more effective restraints on domestic consumption in the interests of further enlarging our aid to the hungry peoples overseas. In respect to the foodstuffs which were in greatest demand for the export program, per capita civilian consumption levels in 1946 as compared with 1945 declined by 6 percent for wheat, declined by about one-half of one percent for fats and oils and for sugar, and actually increased for cheese, canned milk and meat. Increases were also registered in the per capita civilian consumption of other major food categories, including vegetables, fruits and fruit juices, and table beverages, while the reduction in poultry and egg consumption was less than the increase in meat consumption.

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and the occupying powers in Austria in 1945-46 amounted to an additional million tons." (United Nations Relief and Rehabilitation Administration, *Economic Recovery in the Countries Assisted by UNRRA*, Washington, D. C., September 1946, p. 4.)

101 *The National Food Situation*, January-March 1947, pp. 3-4.

102 *Washington Post*, April 15, 1946.

Other estimates by this same agency<sup>103</sup> reveal that while the proportion of total food disappearance accounted for by civilian consumption increased from 81.3 percent in 1945 to 90.0 percent, the share going to government-financed and commercial exports as well as shipments to the U. S. possessions increased from 6.9 percent in 1945 to 8.2 percent in 1946, thus raising the ratio of net exports to total food disappearance from 2.1 percent in 1945 to 4.0 percent in 1946. While this increase in U. S. aid was clearly a significant one, it can hardly be characterized as outstandingly generous, especially in view of the unprecedented domestic consumption levels that were being fostered in competition with relief needs which leading government officials had repeatedly described in the most poignant terms. As a final observation, it may be noted that during the three years 1944, 1945 and 1946, merely the increase alone in domestic civilian food consumption over the 1943 level accounted for more food than total exports and shipments, and for more than two and one-half times as much food as total net exports and shipments during those same years.

Succeeding months brought the re-appearance of familiar patterns: the initial under-estimation of overseas requirements, the sudden revelation of desperate shortages, the vigorous exhortations and fervent pleas for voluntary curtailment of consumption through egg-less, wheat-less and meat-less days as well as through other expedients, and, also, the continued resistance to altering the basic policies which were hamstringing relief and rehabilitation programs.

In its report on the food outlook for 1947, the Bureau of Agricultural Economics foresaw in the fall of 1946 that, "exports probably will be much smaller."<sup>104</sup> At Christmas, Sir John Boyd Orr, Director General of the United Nations Food and Agriculture Organization, found the world food shortage as a whole "little better than a year ago" and warned that, "there will be critical shortages before the 1947 harvest." After noting that there had been "a little increase in the 1946 harvests in devastated countries of Europe and that the Americas produced a bumper output of food," he also said:

But the latter has been largely offset by increased consumption in the producing countries and by the fact that reserves of food were much less at the time of the 1946 harvest than in 1945. . . . Thus the position between now and the next harvest is still critical with food supplies available to the people

103 *The National Food Situation*, January-March 1947, p. 3.

104 *The National Food Situation*, September 1946, p. 2.

in many parts of the world standing at about half the amount available to the well-fed people. The quality of these diets is also poor because of their low protein and fat content. . . . [The situation calls for] economy measures and even greater generosity on the part of exporting countries.<sup>105</sup>

The beginning of February 1947 found Herbert Hoover preparing to leave for Europe on another official survey of food shortages.<sup>106</sup> On February 3, the *N. Y. Times* was reporting, as the result of another food survey by its correspondents in 20 countries, that, "With famine already on the march in China and the food supply in Britain more limited than it was during the U-boat campaign . . . whatever improvement may have been expected a year ago, the hunger of both victors and vanquished requires help from more fortunate countries to prevent a series of catastrophes." After noting that, "a belief that the worst was over, coupled with the principle of selective relief, prompted a decision by the U. S. not to make further contributions to the UNRRA," the report added that, "The end of the UNRRA presages particularly hard times for Austria, Greece, Hungary, Italy, Poland, Yugoslavia and, above all, China." One month later, Dr. D. A. FitzGerald, Secretary General of the International Emergency Food Council,<sup>107</sup> described the world food situation as follows:

Most of the globe is in for another hungry year. . . . Not until the 1948 harvest is there any hope of a surplus of bread grains. . . . People are starving in Rumania . . . and China. . . . All over Europe food stocks are low and the daily ration of 11 ounces of bread may have to be cut before the summer crops come in. All of these things will call for the U. S. to export about as much wheat this year as last and more corn.<sup>108</sup>

That the passage of another ten weeks failed to brighten the outlook was apparent from Dr. FitzGerald's summary of the current and prospective world food situation in the following terms in his report to the International Emergency Food Council on May 25, 1947:

As this Fourth Meeting of the International Emergency Food Council convenes, hundreds of millions are suffering through the worst phases of the second post-war year of shortages in basic foods. In these last weeks before new harvests are gathered, the world's stocks of food are at the lowest ebb.

<sup>105</sup> *Washington Post*, December 25, 1946.

<sup>106</sup> *N. Y. Times*, February 3, 1947.

<sup>107</sup> This agency was established during the spring of 1946 for the purpose of succeeding the Combined Food Board in administering the allocation of exports of foodstuffs in short world supply. (*Washington Post*, May 28, 1946.)

<sup>108</sup> *Washington Post*, March 6, 1947.

Again as at this season in 1946, the world's available export supplies, especially of cereals and rice, are too small to provide the additional tonnages needed by importing countries to keep basic rations at the winter level which itself was too low for comfort or for health and good working energy.

The forebodings expressed at the Third Meeting of the Council concerning the probable food situation in importing nations during the second quarter of 1947 have been unhappily confirmed. Rations of fats and oils, meats and other commodities have had to be reduced in some countries. In others, consumption has been cut by not meeting the rations in full. Fruits and vegetables are not yet available to compensate fully for the decline in the basic foods. Most serious of all, bread rations in Europe and rice rations in Asia have had to be reduced in a number of countries. In more countries unavoidable reductions in cereal consumption have been made by the expedient of not honoring the announced rations in full. In perhaps a dozen additional countries there is grave doubt as to whether supplies in sight will bridge the gap until the domestic harvest is available. In these countries the situation is so precarious that a delay of harvest of so much as a week beyond the date now anticipated could be the deciding factor.

Grain stocks in almost all importing countries are lower now and will be lower on June 30 than they were at the same times last year. Cereal imports required to maintain rations at the level of last winter amount to nearly 8 million tons for the period of July-September. . . .

. . . the early prospects for 1947-48 are for continued world shortages in the major foods and fertilizers passing in import-export trade. The Council again, unhappily, must consider its future activities against a grim rather than bright supply-demand position.

This is the more disquieting because it extends further toward the breaking point the long strain which has been undergone by the nations in the deficit areas. Cereals, including rice, provide well over one-half the caloric food intake of the world's population. Limited supplies have necessitated restricting the consumption of bread and rice by hundreds of millions of people. Nor have supplies permitted a compensating increase in the consumption of other foods. On the contrary, in many countries consumption of fats and oils, meats and other important food commodities has been even more restricted. Sugar consumption, while higher than a year ago, is still generally below the prewar level.<sup>109</sup>

The policy which seems to have characterized much of our post-war aid, of helping as much as possible short of substantially discomfiting

<sup>109</sup> International Emergency Food Council, *Report of the Secretary General to the Fourth Meeting of the Council*, mimeographed, Washington, D. C., May 1947, p. 1.

domestic producers, distributors and consumers, could have had no outcome but to limit aid to inadequate proportions—thereby contributing not only to prolonging the food crisis, but also to further delaying economic recovery in the afflicted areas, for deprivation has demonstrated anew that even modern economies have deep roots in the wheat standard. More broadly still, it may be hazarded that the “too little” of post-war aid has left gaping wounds in the economies of erstwhile allied and liberated areas which may well be actively festering, and that the United States may yet be compelled, in its own national interest, to squarely face the obligation of contributing to the reconstruction of war-torn areas with the same generosity of motive, method and materials that characterized its lend-lease aid to the joint allied war effort.

In assessing the full effects of the shortcomings of our wartime food program, it must be realized that the deficits in imports and the reductions in caloric intake in liberated areas are only the initial stages in a chain of deteriorative pressures and impacts that tend all too rapidly to pervade the entire structure of social relationships. Some of these further reaches were noted in Dr. FitzGerald's warning, almost two years after the end of the war, that:

The cumulative effect of these food shortages is becoming more and more serious, nutritionally, economically and psychologically. People are protesting more and more about the continued food shortages. In some instances, the protests have reached the stage of violence and rioting. Economic and industrial rehabilitation has unquestionably been retarded. Of special significance have been the effects of inadequate food supplies on coal production, in Asia as well as in Europe.<sup>110</sup>

It seems apparent, moreover, that such developments effect grave repercussions in the political realm as well, not alone within individual states but internationally. In such circumstances, force may constitute a means of restraining the overt consequences of these explosive forces, but few can expect it to dispel the sources of such turbulence. The bomb craters in war-torn economies must in the end be filled with food and productive resources, not weapons.

<sup>110</sup> *Ibid.*, p. 3.

**PART E**  
**CONFLICTING PRESSURES**  
**AND**  
**PRACTICAL ECONOMIC PLANNING**





## CHAPTER XVI

### PLANNING OBJECTIVES AND THE ROLE OF UNCERTAINTY

THE foregoing analysis of agricultural mobilization invites consideration of the significance of such experiences for the broader problems of national economic planning. It is obvious that no study as narrowly circumscribed in scope as the present one can offer an adequate basis for appraising either the theoretical potentials or the practical limitations of national planning. Our growing concern with the problems of governmental leadership and control in an economy being drawn more and more tightly together by the centripetal pull of industrialization has inspired a rapidly expanding body of American literature on planning. But such writing is still so heavily dominated by theoretical speculation as to suggest the utility of re-examining current conceptions of the major problems of national economic planning in the light of such actual planning operations as the present study describes.

Wartime economic planning in agriculture was molded by the interaction of many problems and pressures—some of them peculiar to agriculture or to a period of active mobilization, many others limited to neither. Thus, the fundamental problems of agricultural mobilization were rooted not only in the distinctive attributes of agricultural processes but, to an even greater degree, in the heavy burdens which war imposed upon the entire economy. The basic origins of the uncertainties, fears and conflicts of interest which entered into the determination of wartime agricultural policies did not differ much from those in other sectors of the economy. Moreover, mobilization efforts in agriculture were constantly impinging on those originating elsewhere in the economy, particularly at the point of competition for the allocation of the nation's available resources; and this forced continuous mutual accommodations in planning policies within the framework of guiding wartime objectives.

Nor was wartime economic planning wholly free from the carry-over of peacetime problems. Some of the most serious issues of mobilization were generated by the clash between major war requirements of great urgency and the momentum of long-established habits of production, distribution and consumption—with the force of the latter further intensified by the inevitable peacetime orientation of the facilities and economic relationships with which the nation entered the war. Also worthy of emphasis in this connection is the fact that even in a war economy it is

essential that a large proportion of available resources continue to be devoted to the production of civilian goods and to other employments similar to those undertaken in peacetime. In addition, efforts to minimize the number, complexity, and manpower requirements of direct governmental controls led to an often under-estimated degree of reliance on price differentials and other customary guides to economic behavior. And as the preceding pages have made abundantly clear, over the whole of wartime economic planning lay the insistent pressure to modify proposed measures wherever possible in the interest of easing anticipated post-war reconversion difficulties. In considering the relevance of agricultural mobilization findings to wider realms of planning, it should be noted, too, that the major processes and techniques of planning are much the same in war as in peace, in the agricultural as in other segments of the economy, and, indeed, have much in common whether employed by government agencies or by private corporations.

Serious shortcomings have already been revealed in sector after sector of agricultural mobilization. Within each sector, the search for immediate causes necessarily centers on the distinctive conditions there found; but when one views the aggregate results of agricultural mobilization, these specialized causations are far overshadowed in significance by the striking parallels to be found among the performance patterns in each of the sectors. Behind the consistent array of shortcomings in results may be observed common tendencies to under-estimate the scale of mobilization requirements, to establish unduly limited adjustment goals, to rely on policies barely edging beyond the limits of past practice, to tolerate patent ineffectiveness in the execution of newly adopted programs, and to exhibit a singular readiness to retreat from even urgent goals when these failed to elicit prompt adjustments of the magnitude recommended. Accordingly, the search for the causes of agricultural mobilization shortcomings must be concentrated on the sources of the inhibitions and vacillations which dominated both the strategic and the tactical planning of wartime food management, and thereby ensured the inadequacy of eventual results.

Agricultural mobilization measures were the end-product of mutually interacting pressures exerted by the agencies of government, by agricultural production and distribution interests, by industries competing with agriculture for available resources, and by the public at large—with each of these groups being further sub-divided over a variety of specific issues. In terms of the dominant motivations involved, wartime policies were influenced most forcefully by the sharp conflict between, on the one hand,

the general desire to win the war, to hasten its conclusion, and to minimize the attendant toll in human suffering and property damage, and, on the other hand, the persistent effort by each section of the population to maximize its own wartime prosperity, comfort and independence and to safeguard itself against post-war threats to its continued well-being. In addition, mobilization efforts were also affected by the inescapable uncertainties involved in planning far into the future and by the admitted technical inexperience of government agencies in executing far-flung and intricate economic programs under conditions of developing mobilization and extreme haste.

### I. MOBILIZATION DEMANDS ON PLANNING

The approach and onset of war left no room for dispute about the necessity for mobilization; but there remained ample basis for disagreement about objectives, policies, and methods at virtually every stage in the process. Fundamentally, mobilization means change—change in production, distribution and consumption patterns; change in the allocation of manpower, capital goods and other resources; change in the character of risks to be assumed, in the distribution of rewards, and in the very means by which economic behavior is guided. For any sector of the economy, or for any segment of the population, the impact of mobilization is determined both by the degree of mobilization deemed necessary—which defines the total wartime burden to be borne by the nation as a whole—and by the manner in which this load and attendant returns are apportioned among those contributing to the outcome. It is of great significance for the analysis of wartime developments, therefore, that neither of these crucial sets of decisions could be based solely upon considerations subject to objective and precise determination.

The character of the economic changes dictated by war urgencies is readily indicated by reviewing the basic purposes of mobilization and the general means of effectuating them. Mobilization planning, like all economic planning, is designed to effect changes in accordance with predetermined ends—either through accelerating the tempo of trends already in the making, or by promoting developments which would otherwise be unlikely. In a period of hostilities, however, economic planning calls for more widespread changes than would ordinarily be sought in peacetime, for the greatest possible haste, and for an over-riding emphasis on the particular adjustments required by the nation's war objectives. Specifically, the primary tasks of economic mobilization were to increase allocations of manpower to the armed services; to provide for the essen-

tial requirements of the domestic civilian economy on which the nation's entire war effort rested; to expand the production of weapons and other goods destined for American and Allied forces; and to increase the exportable supply of commodities needed to sustain the war economies of Allied and friendly powers and, later, to ease suffering in liberated areas, to expedite the pacification of conquered peoples, and to speed post-war rehabilitation and reconstruction.

Applied to agricultural resources, mobilization programs were required to ease the effects of import deficits caused by the loss to the enemy of customary sources of overseas supplies; to expand total agricultural production so as to maximize food supplies available for our own armed forces and friendly claimants abroad; to reduce the excess of domestic consumption beyond the levels necessary to maintain vigorous health; and to minimize agriculture's demands on scarce productive and distribution resources.

Equally apparent were the basic elements of a general strategy for bringing about proposed adjustments. The essential means of moving toward mobilization objectives were to increase the volume of resources utilized by the economy, to raise the level of output per unit of resources, to re-allocate available resources as between customary employments and those deemed more essential in wartime, and to alter the proportionate division of resultant output between domestic civilians and other war-time claimants. Increasing the total volume of resources utilized required the harnessing of hitherto idle resources, as well as the expansion of imports of needed resources from abroad through more active procurement in foreign markets and, over the longer run, through encouraging foreign producers to expand output available for export. In order to raise the level of output per unit of resources, it was necessary to curtail the under-utilization of available resources and to promote the more general adoption of the most efficient production and distribution methods known. The effective re-allocation of resources between customary and war-oriented employments required determination of the relative essentiality and needed output levels of all major categories of production utilizing scarce resources, of the relative efficiency of given resources in alternative applications, and of the probable advantages and disadvantages of various means of effecting the shifts found to be most desirable.

In planning for these purposes, changes had to be introduced at the very core of the relationships to which our economic behavior has been geared to respond: what should be produced had to be determined not by reference to competitive market price offerings, but by measures of

putative contributions to the Allied war effort; which resources should be shifted, and to what employments, had to be decided by considerations not of habit-rooted preference or prospective profits but of calculated relative efficiencies; and penalties and outright coercions had to supplement money incentives in order to ensure promptness and thoroughness of compliance. To change the distribution of resulting output, not only were centralized decisions in Washington required, but also a complex apparatus of direct and indirect controls guiding the flow of goods and services through every major switching point in the distribution process.

Such recognition of the broad categories of change to be sought and of the possible means whereby they might be effectuated did not, of course, constitute "a plan"; it represented only the first stage in the translation of generalized mobilization needs into objectives sufficiently specific to serve as working guides to actual planning efforts. In order to convert such a structure of alternatives into a practicable campaign strategy, it was necessary, next, to determine the degree and rate of mobilization to be attained, to formulate criteria for choosing among available alternatives, and to design organizational machinery for resolving important disputes and for carrying out intended policies.

The literature on national planning offers no generally accepted definition of the scope of what is called "planning". Some writers seem to conceive of planning as limited to the formulation of broad objectives and principles by an autonomous body of technical experts. Thus, the focus of their interest is a stratospheric level of policy development untainted by detailed considerations of political and administrative feasibility, and sharply differentiated from the subsequent executive activities which are often referred to in invidious terms. Others treat planning as limited to the engineering of governmental programs designed to effectuate objectives assigned from somewhere on high. Still others, while not in agreement about the derivation of objectives, unite in urging that planning must be so conceived as to embrace both the original design of programmatic measures and their subsequent application—emphasizing that effective and realistic planning must be rooted in the continuous analysis of shortcomings and difficulties on the firing line.

In the present study, intimate examination of agricultural mobilization has indicated over and over again the close interlocking of, and interaction between, successive stages in the plan and in effecting its fulfillment. This emphasizes the necessity for a conception of planning sufficiently broad to include the entire system of tasks and responsibilities within which the following may be differentiated as major functional components:

- a. The definition of needs to be met;
- b. The determination of maximum practicable adjustment potentials and of the factors affecting them;
- c. The development of annual planning goals and the formulation of programs designed to achieve them;
- d. The execution of resultant measures;
- e. And the periodic appraisal of progress and of the factors affecting it, as a basis for regularized, if not continuous, reconsideration of objectives, policies and administrative operations in the light of changing conditions and experiences.

Although these functions are listed sequentially, it should be emphasized again not only that the successive stages merge into one another, but also that changes anywhere in the process tend to engender pressure for appropriate adjustments throughout.

## 2. DEFINING MOBILIZATION PLANNING OBJECTIVES

Because they threatened a substantial upheaval in established economic relationships, the actual planning of mobilization policies became the center of an unabating and fierce struggle among organized pressure groups seeking to safeguard their several interests. This competitive jockeying for advantage focussed primarily on the allocation of specific mobilization tasks and attendant rewards. But the effort of each group to minimize its own burdens also created an indirect, yet powerful, pressure both to restrain the magnitude of the total burdens to be apportioned (*i.e.*, to shrink back the contemplated degree of over-all mobilization), and to channel the remainder into those forms which would be least disruptive of existing production, distribution and consumption patterns.

The immediate objective of actual planning operations is to effect stipulated alterations in the volume and composition of the resultant yield of goods and services. But what accounts for the particular patterning of proposed output goals? Both in theory and in practice economic planning must begin with, and is thereafter dominated by, an array of findings or assumptions regarding the scale and relative urgency of the needs competing for available resources. And whether these assumptions or findings are stated or left unstated, they nevertheless play a central role in all subsequent planning activities.

It should also be noted that the entire process of transforming estimated needs into actual planning objectives tends to be characterized by a progressive lowering of target sights. The original conceptions of need which father economic planning proposals define the maximum possible

degree of change to be sought. Subsequent considerations, however—of which the most important are probably physical feasibility, economic feasibility, administrative feasibility, and the widely inclusive factor of political feasibility—can, often should, and generally do reduce envisioned adjustment potentials, frequently in very substantial measure. Thus, only conceptions of the scale and relative urgency of needs which are substantially at variance with those defining the ends served by current economic arrangements can be expected to negotiate these successive reduction processes and still eventuate in actual planning objectives calling for more than just peripheral adjustments. And conversely, when actual planning objectives seek no more than minor modifications in the current flow of goods and services, the primary cause of such restraint may well be found to reside in a tradition-bound conception of the needs to be served.

Experience has shown that although the winning of a war already under way surely ranks among the very strongest motivations for social action, not even this extraordinarily favorable circumstance can be assumed to ensure all-out support for thorough-going mobilization. Overwhelming support may be anticipated for whatever degree of mobilization the great mass of a democratic population genuinely accepts as absolutely necessary to defeat the enemy. But the war revealed a disconcerting and erratic gap between what many Americans were willing to accept as a national necessity and what they were willing to accept as necessities justifying personal sacrifices.

Those charged with the leadership of our war effort could well reason that every further intensification of mobilization efforts beyond the level deemed essential to ensure eventual victory would yield additional benefits of some kind—reducing further the possibility of serious military reverses, or hastening the termination of hostilities, or curtailing suffering in friendly and liberated areas, or augmenting our capacity to aid rehabilitation and reconstruction programs. On the other hand, planning officials were confronted by the realization that these various prospective benefits were not popularly considered to be equally compelling. It was obvious, too, that even the best possible estimates of the minimum essential degree of mobilization, and especially of the incremental benefits promised by progressively higher levels of mobilization, were unavoidably subject to wide margins of error. Every intensification of mobilization measures, moreover, threatened immediate increases in production, distribution and consumption burdens, the risk of commensurately greater demobilization problems, and the further subjection of private decisions to distasteful and often confusing decrees from Washington. Hence, attempts

to promote higher levels of mobilization beyond the accepted minimum were handicapped not only by the impossibility of evaluating potential benefits and probable costs in comparable terms of personal or pecuniary significance, but also by the fact that the prospective benefits appeared to be so uncertain, tenuous, and remote as to pale beside the definite, immediate and painful burdens involved. Nor was it without significance to the politically astute that, while the burdens attending higher degrees of mobilization would have to be borne by our own citizenry, most of the palpable benefits were to be channeled abroad.

It is an axiom of economic theory that needs exceed the supply of goods and services not only in periods of grave emergency but at all times. Hence, as indicated previously, even the boldest kind of realistic economic planning often requires the whittling down of ideal objectives in order to bring them into reasonable alignment with the practicable output potentials of available resources. The test of physical feasibility requires the elimination of those farther reaches of contemplated adjustments which must be ruled impossible of attainment within the given time perspective of a planning program because of such factors as inescapable natural and physical limitations on rates of growth, on the geographical mobility of resources, and on the adaptability of available facilities to new uses. The test of economic feasibility requires the elimination also of those adjustments which, while physically possible, fail to offer benefits substantially commensurate with the cost of making the changes proposed. Considerations of administrative feasibility require the elimination, too, of those adjustments which, having passed the previous tests, nevertheless pose problems of effectuation which seem well beyond the capabilities of available or readily contrived organizational machinery. But where planning is forced to operate against the grain of established institutions and resulting popular habits, it is the test of political feasibility which tends to be the chief determinant of how much of what is recognized as need will find its way into actual planning objectives. Yet, this test has so much less basis in objective, technically verifiable determinations than the others as to represent, in comparison with them, little more than a projection of the will and self-confidence of those applying it. Given a lack of sympathy with the intentions of a suggested planning program, or a basic fear of the hostility and resistance which might be aroused, responsible officials can readily find grounds for declaring proposed undertakings politically unfeasible. It is particularly important, therefore, to examine the interplay of personal and external pressures within which officials must make such crucial decisions.



### 3. THE ROLE OF UNCERTAINTY IN PLANNING

Uncertainty is generally considered to have been one of the major factors influencing the definition of mobilization needs and the development of wartime policies. By this is meant the indeterminacy that must attend all efforts to plan ahead, compounded in some measure by the foreknowledge that the risk of unexpected developments is never greater than during the tumultuous vicissitudes of global war.

Planning officials faced at each step in the war the possibility that projected targets and programs might prove abruptly excessive or inadequate, relative to the requirements that would actually emerge. Excessive adjustments offered at least the security of maximum contributions to the war effort, though at the cost of heavier wartime burdens than would in the end be found to have been necessary. More limited measures offered the comfort of reduced immediate mobilization burdens, but only at the risk of enormously serious consequences. Furthermore, the long period necessary to effect major adjustments meant that caution represented not a middle way but a primary commitment to under-preparation. To the planning technician aspiring to complete objectivity and precision, errors in either direction were equally distressing. To military leaders, fired by the immediate demands of war, the risks of possible shortcomings in mobilization seemed completely to overshadow any possible costs of carrying such measures to extremes; while to those farmers and other groups called upon to bear the mounting exactions of higher levels of mobilization, each unnecessary increment in burden seemed a thing to be avoided until circumstances clearly demonstrated its unavailability. And to those bearing political responsibility for the decisions made, it was difficult to forget that whatever errors might become discernible in time with the aid of hindsight—whether due to excessive zeal or to excessive timidity—would present strong weapons to the political opposition.

Here, then, was one of the central problems of planning in action: how to plan ahead soundly in the face of the omnipresent lack of adequate data; how to supplement inadequate objective determinations in the interests of bold but effective planning. Wartime economic planning was confronted by major uncertainties in estimating total needs and output potentials. Efforts to define an optimum pattern of mobilization adjustments revealed the absence of guides so comprehensive in scope, so incontestable in principle, and so invulnerably objective in application as to defy effective and responsible criticism. In so huge, intricate and wealthy an economy, there appeared to be few ends which could be approached

by only one, clearly superior path. Moreover, there were as yet but scant grounds in past experience for undertaking any precise appraisal of the relative effectiveness of alternative government policies, systems of organization, and administrative methods. And eloquent arguments against upsetting familiar arrangements appeared at every turn.

Here was the tense battleground of the planning technicians, the military authorities, the politically responsible legislators and administrative officials, and the pressure agencies supporting particular private interests.

In practice, uncertainty had an important bearing on the process for establishing actual program objectives. One of the most vexing of the practical problems of wartime planning was the devising of procedures whereby appropriate weight could be given to the proposals of major interest groups without, at the same time, permitting such considerations to vitiate essential programs. This conflict between all-out mobilization and personal interest was all too often over-simplified. Some extremists posed the issue as a choice between winning the war and unfettered self-aggrandizement. Others viewed the alternatives as complete subservience to extravagant military and bureaucratic whims, or protection of private and civilian groups against arbitrary disregard of their personal freedoms and the repression of dissident opinions. In reality, such distortions served only to intensify the confusions and rancor incident to the imposition of complex and necessarily burdensome mobilization tasks, while ignoring the constructive contributions of such conflict in guiding the development of effective wartime policies.

Attention has been called to some of the uncertainties characteristic of mobilization planning to emphasize the point that, in the period studied, objective determinations alone did not provide an adequate basis for completely resolving major policy issues. To whatever degree mobilization requirements and programs could be determined by objective means sufficiently authoritative to inspire widespread credence, it would appear to have been appropriate to accord such findings a privileged status as against the special pleading of admittedly partisan groups. But when the objective determinants of governmental proposals are necessarily and patently fragmentary and subject to wide variations in interpretation—as is particularly likely in the case of mobilization because of the dissimilarities of previous wartime experiences and because of the influential role played by uncontrollable and even unpredictable developments—the resultant amalgam of earnest fact-finding, guesswork, good intentions, and narrowly specialized viewpoints can hardly be considered fully self-justifying. In such circumstances—and these represent common rather

than atypical situations in emergency planning—there is no sound and practicable alternative to the development of mobilization plans and policies under continuous democratic criticism from the major interest groups affected.

To argue that the formulation of governmental policy is the responsibility of duly elected and appointed officials merely emphasizes the locus of final decision. It does not disprove the need for careful evaluation of the conflicting proposals advanced by responsible groups; for these groups reflect not only a seeking after differential advantages over others, but also a wide range of specialized knowledge and experience relevant to particular problems.

It should be emphasized, however, that due recognition of the constructive potentialities of competitive self-interest in the development of wartime planning certainly does not imply approval of the distortion of planning objectives under the hammering of special interest groups. Nor does it justify the subordination to private business demands of such objective guides to program planning as were available. A great many instances could be cited, of course, in which the war effort was materially advanced by the withdrawal or alteration of military supply programs and of other government projects as a result of their exposure to critical appraisal by profit-motivated but also competent, imaginative and patriotic industrialists. But those familiar with wartime developments in Washington could probably cite even more numerous examples of private pressure groups whose lobbying activities seemed to be more closely concerned with swelling their own returns and minimizing their own burdens than with contributing as fully as possible to the war effort. Indeed, although much current discussion of national economic planning stresses the dangers of excessive regimentation by a power-hungry governmental bureaucracy, our own wartime experience underlines the importance of likewise preventing the subversion of appropriately determined national planning objectives and policies by undue concessions to narrowly constituted, self-seeking groups.

The detailed analysis of agricultural mobilization presented in preceding chapters offers substantial ground for concluding that shortcomings in performance were traceable less to the arbitrary disregard of private business preferences by dictatorially-minded mobilization officials than to a marked imbalance in the opposite direction which resulted in the unwarranted subordination of governmental findings of need. Uncertainty was one of the factors responsible for this reversal. Others, to be discussed later, included the effective organization of interests seeking

to minimize mobilization adjustments, widespread ignorance, apathy and over-confidence among the public at large, and the undermining of effective government leadership by inexperience in planning, by internal frictions and by political timidity.

In addition to its influence on the planning process, uncertainty has also been credited with tending to inhibit both the magnitude and the scope of the changes projected by actual planning objectives. This view seems to derive support from the widely accepted argument that, because of the enormous inertia of human habits and institutional arrangements, the burden of proof rests on the proponents of change, and, hence, that uncertainty reinforces the case for caution. What would thus appear to be a general principle forcing planning, too, to seek only peripheral adjustments in prevailing trends may be open to some question, however, despite its apparent confirmation by agricultural mobilization experiences.

In theory, at least, the sheer technical fact of uncertainty need not have altered the relative strength either of those pressing for all-out mobilization or of those seeking to restrain the scale of proposed adjustments. The only necessary effect of the absence of precise estimates of probable needs and results was to widen the margin within which the absence of relatively fixed guides encouraged fuller reliance on negotiation among contending factions in making decisions about objectives and implementing policies. In the arena of policy conflict uncertainty may be envisioned as a weapon not inherently designed to support either boldness or caution, but capable of use by each contender in the furtherance of his own interests—using the admitted fact of uncertainty to deflate the promised benefits and to maximize the potential burdens of opposing proposals, while taking advantage of that same penumbra to magnify the attractions of his own recommendations.

In assessing the bearing of uncertainty on the planning preferences of the public at large—presumably the determining force in a democracy, and perhaps even in systems ostensibly less dependent upon mass approval of governmental policies—it is commonly asserted that uncertainty will tend to reinforce the apparently deep-seated aversion of all peoples to far-reaching changes. There can be little doubt that uncertainty does tend to reduce the pulling power of incentives to change. But the readiness of a population to have its imagination fired by the potentials of bold change depends upon the situation in which such proposals are made. When the prevailing mood is one of widespread and serious dissatisfaction—as it may be in the depths of a grave economic depression—or of

gripping fear of inadequacy in the face of looming emergencies—as it may be with the outbreak of war—even the mere promise of improvements offered by proposals for change may well be preferred by many to the continuance of more familiar but less reassuring national policies. Even fascism has demonstrated the willingness of large masses of people to embark on big and arduous programs, provided the latter promise escape from ramified confusion and frustration. It is perhaps one of the most serious weaknesses of liberal democracy that it makes so little use of large, evocative, collective goals. Emergencies like depression and war ready people for plunging whole-heartedly into sweeping common undertakings. There is evidence that in December 1941 and the months immediately following there was a powerful upsurge in the public's desire to pour its energies into all-out mobilization, however unfamiliar or burdensome its demands might be. But much of this will to drive ahead and even to endure patently war-induced sacrifices seems to have been allowed to dribble away and subside for sheer want of direct, inspiring and engrossing outlets. Thus, it is not the general acceptance of enacted mobilization measures that calls for explanation, but the failure of the American public to demand the far more thorough mobilization of agricultural resources. One might even conclude with good reason that the lack of popular dissatisfaction with the agricultural mobilization measures taken could have been attributable only to an atmosphere of overconfidence, engendered either by inadequate or misleading information about the true relationship between needs and performance.

There is ample reason, therefore, to question the widespread belief that uncertainty was itself the dominant or even a major force in directly shaping the magnitude and scope of actual mobilization objectives. Uncertainty did influence the organization of the planning process. But it seems probable that the competitive interest groups thereby drawn into the planning process made greater use of uncertainty in seeking to justify their own proposals than was warranted from the standpoint of national need. In short, the major influence of uncertainty on mobilization planning was probably to extend the margins around available factual determinations within which decisions were molded by a species of collective bargaining, or trading, among conflicting interest groups. Once initiated, however, such negotiations were not infrequently permitted to overflow the boundaries of uncertainty and even to submerge the influence of the factual determinations about which bargaining should presumably have been centered.

## CHAPTER XVII

### PLANNING AND EXTRA-GOVERNMENTAL PRESSURES

PRIVATE interest groups represented a perceptibly more influential source of pressures on actual planning for agricultural mobilization than did uncertainty. Among the more important of these extra-governmental groups were farmers, processors and distributors of agricultural products, consumers, the suppliers of farm machinery, fertilizers and credit, and the other war industries competing with agriculture for scarce resources. Inasmuch as most of the major substantive issues of agricultural mobilization have already been discussed in detail, the treatment here will be confined primarily to identifying the sources of conflicting views and the factors accounting for such differences, to reviewing the policy recommendations tending to grow out of each group's distinctive interests, and to appraising the effectiveness with which each group was organized to press its claims through the available channels for influencing decisions.

#### I. FARMERS

Farmers, like most other groups, were eager to maximize both their contributions to the war effort and their own well-being. Could the means of achieving the latter have been brought into effective alignment with the changes dictated by mobilization urgencies, the resultant pressure for the latter would have been irresistible. Integration of such polar incentives was not an easy matter, however, and it was certainly beyond achievement by sheer decree. Mobilization required far-reaching changes in the volume and composition of agricultural output and hence in the allocation and utilization of available resources. Patriotic impulses could help; but farmers' production decisions were influenced far more insistently by their facilities, experience and habits, and by the structure of price, income and security incentives which had grown up in peacetime.

#### *Production Policies*

After some eight years of governmental restraints on output levels, farmers were, of course, favorably inclined towards expanding agricultural production, especially after their long-nurtured fears of catastrophic surpluses began to subside in the face of steadily rising market demand. At first, such production increases were conceived within the limits of

effecting the expansion hitherto prevented by legal restrictions. In time, further increases were encouraged by attractive returns which led farmers to harness even their less efficient and more costly resources. And as a result of the continuing increases in requirements, and especially of the enactment of comprehensive minimum price guarantees, many farmers were at last willing to seek the still higher levels of production attainable through acquiring additional resources. Most farmers probably foresaw some limit to the justifiable levels of expansion, and most of them probably expanded their own operations less than they would have desired. In this they may have been influenced either by their inability to secure additional resources on terms that appeared attractive, or by a sharpened sense of caution inspired by the risks of progressive expansion as well as by the steady approach of the end of the war. But there can be little doubt that the generalized expansion of production was the most widely favored among agricultural mobilization objectives—simultaneously offering larger incomes, a satisfying sense of all-out effort, and an outlet for patriotic drives. There is obviously no adequate basis for estimating what farmer attitudes toward expansion would have been if such a course had threatened immediate and substantial economic burdens—as did a number of other mobilization measures and proposals. It is suggestive, nevertheless, to note the infrequency with which expansion was deliberately carried, and then maintained, beyond the point of personal economic advantage.

This very enthusiasm for expanding production also helped to intensify farmers' sharp hostility to efforts to reduce the allocation of productive resources to agriculture. Denial of direct means of increasing income arouses antagonism in any group at any time. But such measures in the midst of urgent mobilization for war seemed to intensify farmers' natural reactions by investing them with a species of patriotic justification. To farmers who were happy in their belief that mobilization was virtually synonymous with expansion, measures seeking to shift manpower out of agriculture, or to curtail the production of farm machinery and other agricultural supplies, appeared to verge on sabotage of the food program. Support of these views was probably most vigorous on the part of those dependent on hired labor and those contemplating increased expenditures for farm equipment and supplies. It should also be noted, however, that no substantial segment of the rural population expressed energetic support of reduced allocations to agriculture.

Changing the composition of agricultural output was another goal which failed to arouse wide support among farmers. Although not fully

reflected in their actual output, farmers did seem to understand and to accept the need for promoting extraordinary increases in the production of crops designed to offset the loss of customary imports, as in the case of fats and oils. However, they were never led to understand clearly the need for basic shifts in the allocation of productive resources, whether from meat production to dairy production, or even from feed crops and animal products to food crops for direct human consumption. It is true, of course, that even if they had been thoroughly and forcefully apprised of the reasons for such proposals, farmers might still have been unwilling to redirect their efforts accordingly. Mobilization officials found it convenient to blame under-fulfillment of goals on farmers' traditional aversion to change of any kind. Actually, considerable changes did take place both in the volume of livestock production and in its composition, and such changes conformed reasonably closely to attendant economic incentives. One must grant that temporary price incentives alone might not have been sufficient to effect revolutionary alterations in the composition of agricultural production, especially within a short span of years. But it is not easy to avoid the conclusion that farmers were sufficiently responsive to price adjustments to have made possible a far greater measure of conversion through such means than was achieved. However, even this seemingly cogent argument, that it would have been administratively feasible for the government to do more than it did, tends to be subordinate in practical economic planning to the central political issue: would not farmers or any other major economic group prefer to tread well-worn paths rather than venture onto new trails if possessed of political power enough to secure the same returns from one course as from the other?

This question of the reality of incentives for change had an important bearing on farmers' reactions to proposals for increasing the efficiency with which available resources were utilized. They could hardly be charged with conscious rejection of such opportunities; rather their attitude seemed one of comparative disinterest. This may be ascribed in part to their unfavorable conditioning during the years of peace; in part to the greater attractions of competitive demands on their time, energy and resources during the war; and in part to a "show me" tendency to hold off change and its attendant risks and discomforts in the absence of strong inducements to do otherwise.

In general, farmer interest in maximizing output per unit of input resources was inhibited prior to the war by the ample supply of such resources, by the heavy burdens already being borne as a result of mount-



ing surpluses of agricultural products, and by the customarily weak relation between considerations of national welfare and those of immediate personal profit. Lacking any compelling incentive to conserve the nation's supply of productive resources, or to further expand the nation's output of foods and fibers, farmers had no reason to increase output per unit of resources used except for the possibility of thereby reducing their own production costs and especially out-of-pocket expenses. During the long years of agricultural depression, incentives to increase yields per acre, whether through more intensive cultivation or through heavier applications of fertilizer, were largely blocked by the prevalence of market surpluses and low prices. The stimulus to fuller utilization of available farm labor was largely removed by the fact that farmers could, without cost to themselves, simply lay off hired workers during the slack periods in the agricultural production cycle. Responsibility for minimizing national unemployment never had been theirs. And incentives to increase the efficiency of farm workers were undermined by the prevailing low level of wages, by the fact that much of the work was in any event done by the farm operator and his family, and by the inability of most farmers, lacking expensive technical help, to devise the means whereby substantial increments in work efficiency could be achieved. In respect to farm machinery, the limited applicability of such equipment on most farms pointed to an increase in the number of farms serviced by each set of machinery as the most important means of increasing the utilization of this category of resources. Once again, however, no incentive for such adjustments was recognized except the individual farmer's calculus of possible personal gain. In this situation the greater proportion of farmers owning such costly equipment found but meager attractions either in renting their prized possessions for possible careless use by others, or in neglecting their own farms to contract for work elsewhere with their machines.

It seems apparent, then, that substantial untapped potentials in increasing output per unit of productive resources were to be found in agriculture prior to the war, and that the national welfare would have been better served by their realization than by their neglect. Nevertheless, the record suggests that so long as farmers were free to choose between the continuance of habitual work patterns and the energetic exploration of new possibilities, and so long as the direct, personal attractions of the latter were less than compelling, the progress of agriculture at large toward the increasingly effective utilization of productive resources was decidedly laggard. Such an inference also gains some support from the

outstanding exception to the comparative indifference with which farmers regarded the possibilities of maximizing output per unit of resources, namely, their sharply stimulated interest in raising yields per acre after the imposition of crop acreage restrictions by the Agricultural Adjustment Administration. Although such was certainly not its intention, the AAA substantially altered the relative benefits of more intensive, as compared with the customary less intensive, methods of cultivation by limiting the acreage to be planted and thus closely gearing the farmer's returns to his success in increasing average yields. The results suggest something of the possible efficacy of altering even long-hardened habits of resource use by reducing the incentives to their continuance.

The expansion of output requirements and the consequent intensification of competing demands for available resources during the war resulted in materially increasing awareness of the urgent national interest in maximizing output per unit of resources in the agricultural as well as in other sectors of the economy. But such developments were not accompanied by any parallel enhancement of the inducements to farmers to adjust agricultural practices accordingly. In expanding wartime agricultural production, it was possible either to concentrate primarily on increasing the volume of resources employed, thereby minimizing pressure for raising average levels of output per unit of resources, or to concentrate primarily on squeezing more production out of each unit of resources, thereby reducing the demand for resources. Whether in respect to farm labor or other agricultural productive resources, the latter may well have promised the greater benefits to the national economy at large by releasing resources to ease shortages elsewhere; to most farmers, however, it seemed much the less attractive alternative, offering only increased operating difficulties, higher costs, and more substantial risks. In the absence of incentives great enough to offset such expected burdens, one could readily anticipate the direction in which agriculture's political strength would be exerted in choosing between these alternatives.

Similar considerations also help to explain why farmers seemed to take more kindly during the war to the expansion of domestic agricultural imports into the U.S. than to the development of increased capacity abroad for the production of farm products similar to those produced domestically; this despite the fact that the latter clearly offered the greater potential for easing the urgent food deficits plaguing the United Nations' war effort. Thus, heavy imports of feedable grains into the United States were applauded by those farmers who were experiencing difficulty in meeting the needs of their livestock. And even domestic pro-

ducers of such feeds seemed to regard the inflow with unwonted tolerance, partly because demand was patently in excess of domestic production and, perhaps to an even greater degree, because such programs were readily terminable at the first signs of an easing supply-demand relationship. In short, such wartime imports provided American farmers with immediate benefits without attendant burdens and, moreover, left any consequent difficulties of post-war adjustment to be borne by the exporters. The expansion of foreign food production capacity offered a sharply contrasting array of advantages and disadvantages to the American farmer. It was apparent that, during the period of the emergency, the primary benefits of such overseas development programs would flow to farmers in the nations affected, as well as to consumers in the Allied and liberated areas; meanwhile American farmers would be inconvenienced by further cuts in domestic supplies of farm machinery, fertilizers and other agricultural production resources in order to export such necessities to the new producing areas. The more serious deterrent, however, was that, once expanded, foreign agricultural production capacity could not be shrunk back again at our pleasure, and hence would intensify post-war competition for American farmers.

### *Price Policies*

Farmer reactions to price policy issues, too, support the view that the general tendency to cling to familiar arrangements may be less often a product of unreasoning impulses than of the patterning of quite tangible incentives, and that substantial changes in the latter are likely to effect a remarkable loosening of the ties to past preferences.

In the early period of the war, farmer thinking was dominated by the belief that boom and inflation would inevitably terminate in disaster for agriculture, and therefore, that strong government controls over farm production and prices would have to be continued indefinitely. Fearful that any change might be for the worse, most farmers were not only actively sympathetic with wartime economic stabilization objectives, but they would probably have been glad to accept the imposition of price ceilings in return for the establishment of guaranteed price floors. Moreover, farmers had become so habituated to accepting governmental leadership in the planning of agricultural production adjustments—in return for the government's assumption of responsibility for the consequences through concrete price assurances and direct payments—that there was probably a favorable basis in farmer attitudes for the further employment of price and payment incentives by the government in order to promote adjustments in production designed to advance mobilization purposes.

But as the pattern of effective incentives began to change under the pressures of wartime development, so did farmers' attitudes on price policy issues. With the government slow to reorient its programs boldly, it was not long before its leadership was challenged, and then seized, by a powerfully rising and generously rewarding market. The attractions of government incentives designed to appeal to the insecure by offering minimum assurances depreciated rapidly in the face of mounting requirements and prices. Fear of any major change in prices began to melt, or at least to be submerged, when confronted by week-to-week and month-to-month proof that agricultural prices could not only keep pace with the general price level but actually outdistance it. And any tendency to heed governmental requests due to fear of a sudden price collapse were largely dissipated by the enactment of long-term minimum price guarantees which exacted no conformity to mobilization goals as a condition of eligibility for these guarantees. Thus, lacking potent incentives to follow governmental exhortations, farmers turned increasingly to prospective market offerings as the basis for their private planning of production. When these were in accord with governmental requests, as in the case of certain appeals for expansion, there was probably an added measure of satisfaction in effecting such adjustments. But when market incentives ran counter to governmental pleas, thereby penalizing patriotism, most farmers elected to follow the dictates of the market. And in doing so, they could readily convince themselves that a government invested with sweeping war powers would not have countenanced such sharp deviations between mobilization requirements and market demands if the adjustments called for were really essential to the war effort.

In this merry-go-round, the more thoroughly farmers adapted their operations to the market, the greater were their commitments to continuing along this line, and the greater their hostility to governmental efforts to effect major changes. Under these conditions, voluntary acceptance of governmental proposals might have been sought by either of two means: by out-bidding the market, a course that would not only have been expensive but would have jeopardized the economic stabilization program; or by offering more sweeping guarantees of security, which, by itself, could not have been expected to secure far-reaching results until the prospect of severe market adjustments grew fairly imminent. The only remaining alternative for effectuating mobilization goals, namely, the imposition of outright and comprehensive controls and coercions, faced the opposition of farm groups which were not only numerically important, but which were even more dominant in directing

the application of agriculture's enormous political strength. It needs scarcely be noted, moreover, that even direct coercions are but a sorry and inefficient substitute for positive incentives; for the fact of contrary incentives, however frowned upon officially, only serves to intensify efforts to evade controls, while the effective re-orientation of incentives may well minimize the need for at least the more galling forms of coercion.

### *Differences Among Farmers*

Although farm groups were not unanimous in their reactions to mobilization issues, instances of bitterly contested differences among them were singularly few. This may have been due in part to the fact that, on some issues where attitudes differed, many of those disagreeing with the widely publicized view probably considered the particular problem to be relatively peripheral to their own central concerns, and hence had little interest in pressing a contrary position. Such apparent unity was probably due in even greater measure, however, to the success of agricultural spokesmen and officials in concentrating the attention of farmers on issues at the level of differences between agriculture and other sectors of the economy, and thereby minimizing their consideration of such issues at the level of possible readjustments within agriculture.

Geographical location, the relative scale of farming operations, and product differentiation were the factors which seemed to be most frequently associated with differences among farmers in reactions to mobilization issues. The particular loyalties engendered by sheer geographical location had their most direct bearing, of course, on the issues of modifying the regional distribution of farm labor, agricultural machinery and fertilizers. Those regions which had been advantaged by pre-war allocations were reasonably cognizant of their preferential positions and fought hard to preserve them. On the other hand, oddly enough, those regions which had been disadvantaged seemed unaware of the potentials for alleviating their stringencies from within agriculture itself. Indeed, they actually helped to preserve such distribution imbalances within agriculture by clamoring for relief at the expense not of other farm groups but of the non-agricultural sectors of the economy. This indicates something of the helplessness of the individual farmer and his resulting proneness to accept the leadership of the only sources of information he knows—government agencies and the major farm organizations—even when such leadership is committed to objectives which may not conform to the farmer's own preferences or interests.

Wide as was the range covered by the scale of farming operations, the major line of cleavage along this continuum associated with important differences in reactions to mobilization policies was that roughly differentiating between: (1) the large number of very small scale producers who lacked the means of financing the expansion of their operations even to the point of fully utilizing all of their already available resources, especially of labor; and (2) the lesser array of farmers with financial means to further expand production but being restrained either by a fear of attendant risks or by the difficulties in the way of securing the additional resources which would have been required. The first group were concerned primarily with the expansion of credits for production on terms more favorable in respect to cost and collateral requirements than those available to them from private banking facilities. The more affluent group, on the other hand, were interested rather in the provision of guarantees and additional resource allocations making it more readily possible and profitable to invest in the further expansion of their operations. Other differences between these groups could be listed, but the ones which were important during the war seemed almost invariably to involve disparate, rather than conflicting, interests. Long-standing differences in interest and outlook between "big" farmers and "small" farmers might well have been intensified, had they been forced into open conflict over the division of resources between them. Instead, the persistent efforts of agricultural officials and farm organization spokesmen to lay all difficulties at the door of differences between agriculture and the rest of the economy served to drain attention and energy from this source of intra-agricultural differences as well. It is a telling commentary on the extent to which Federal agencies come in time to become advocates within the government of their particular constituencies, as over against the rest of the economy, that such viewpoints persisted even in wartime.

This careful playing down of internal disputes within agriculture was also extended to reducing divergences rooted in differences in product specialization. Product-oriented interests seemed to bear most directly on the issues of changing the composition of farm output, of reallocating resources within agriculture, and of restructuring price relationships. Serious efforts to effect substantial adjustments in any of these areas, favoring some product categories at the expense of others, were certain to arouse sharp differences among the producers affected. Conversely, the most effective means of minimizing such differences, especially in their impact on mobilization policies and officials, was to relax govern-

mental pressures for altering prevailing production, resource allocations and price patterns. It was this course of expediency that was followed.

Official proposals for the expansion of agricultural production were generally welcomed, of course. Had they entailed direct controls, however, even if only on the degree of expansion permitted each product, thereby limiting some much more drastically than others, product-oriented disputes would have flared up. And these would have been even more serious if controls had sought to force substantial curtailment of some categories of production in order to make way for the expansion of others. But so long as official production adjustment goals were of modest proportions, so long as their over-riding emphasis was on general expansion, and, above all, so long as they remained wholly advisory rather than compulsory, farmers could regard them with reasonable casualness.

National shortages of manpower and of other major productive resources required by agriculture counseled close consideration of the possibilities of deliberate governmental reallocation of available supplies among alternative crop and livestock enterprises. Proposals for such redistribution had necessarily to be based on some guiding determination of the relative essentiality of all farm products competing for the same resources. But as soon as efforts were made to develop such priority ratings, all of the disadvantaged product interests opened fire on the government agencies responsible for such ratings. The outcome was that priority ratings were rendered largely inoperative either by withdrawing them or by raising the less favorable ratings until effective differentiation was virtually obliterated. As a result, it was possible for agricultural spokesmen and mobilization officials to lead a united agriculture in the struggle for increasing total allocations to farmers at the expense of the other sectors of the economy. Furthermore, by permitting such scarcities as still remained to be dealt with primarily through individual bids in the market, mobilization officials helped both to free the government of another embarrassing source of abuse and to prevent the development of aggressive conflicts among organized product groups over the allocation of resources. Unfortunately, such peace within agriculture's family was gained largely at the expense of the very mobilization requirements which had generated the problems of reallocation in the first place.

Differences in the reactions of farmers on a product group basis were most notable in respect to wartime price policies. Even in this connection, however, intra-agricultural differences were sublimated somewhat in the common defense against onslaughts from other sectors of the economy.

Although most farmers were fearful early in the war of what might befall them if prices were given free rein, they were also united in feeling that agriculture had much ground to recover price-wise before reaching a fair balance with the economy at large. Hence, once the fear of imminent price collapse proved groundless, farmers were reluctant to see ceilings imposed on agricultural prices until something of their pre-war disadvantage had been offset. Moreover, although an increasing proportion came in time to see the justice and necessity of curbing continued advances in farm prices, there was widespread agreement in continuing to resist repeated demands that the agricultural price level be cut back to its 1942, or even earlier, levels. Nor was there much conflict among farm groups over the fact that the prices of different products did not advance equally on the open market. Internal differences in attitudes reached serious proportions only in respect to price inequities which farmers felt had been engendered or were being preserved by government action.

The price relationship longest and hardest fought over was probably that between feed prices and livestock prices. Stripped to their essentials, the primary issues were far less complicated than was claimed by those seeking further advances behind a smokescreen of technicalities. Feed producers and livestock feeders were each seeking to increase their profits, first by swelling the total returns to livestock enterprises, and then by trying to increase their shares of this total. For example, when livestock prices continued to mount after ceilings had been placed on corn prices, corn growers were much less interested in having livestock prices reduced, or even in having a ceiling placed on such prices, than in having their own ceilings removed, or at least raised. Similarly, when feed prices advanced more rapidly than livestock prices, the feeders were less interested in cutting back feed prices than in raising livestock prices further. In time, each party could cite earlier relationships between feed and livestock prices which it deemed equitable and which it, therefore, sought to regain—though disagreeing, of course, among themselves about which precedent was the fair one. And yet, these efforts by each to out-maneuver the other were never permitted to obscure or undermine their strong common interest in opposing demands for sharp reductions in *both* feed and livestock price levels. This was the case despite the sharp pressure exerted by such inflated prices against wartime economic stabilization objectives. A similarly sharp awareness of common interests marked other disputes about intra-agricultural price relationships.

In general, therefore, it may be said that farmers' reactions to mobilization issues appeared to be shaped in very large measure by their direct,



personal economic interests. That the results often ran counter to mobilization needs should not be interpreted as impugning the patriotism of farmers; rather, this outcome emphasizes the serious failure of responsible government agencies to restructure economic incentives so as to accord more closely with mobilization requirements. In the situation which resulted, many farmers simply felt that they could not afford to heed governmental exhortations so long as the mobilization authorities countenanced the continuance of market offerings which provided generous rewards for disregarding officially determined adjustment needs.

Such dilemmas as the above, which were allowed to develop throughout the mobilization program, call attention to another of the basic problems of wartime economic planning: How could the fullest possible measure of stimulus to private initiative be retained within a mobilization program which cut across all customary profit considerations with arbitrary imperatives of its own? In an economy long habituated to the competitive struggle of all agents to maximize their personal economic returns, it would have been irresponsible in the extreme to rest the success of mobilization on whatever substitutes for profit incentives could be hastily contrived in the heat of war. On the other hand, not even the most ardent advocates of free enterprise proposed that mobilization be left wholly to the unguided efforts of private initiative. Moreover, compulsion offered only a means of ensuring conformity, not of evoking maximum efforts; for not only are comprehensive controls pervading the entire complex of economic relationships both costly and oppressive, but they are also more certain to secure performance at the minimum levels which are enforceable than at the maximum levels attainable through stimulating the full creative contributions of producers. Hence, even if some degree of coercion was necessary to push along the laggards, the greater part of the pull towards mobilization goals would have to be generated through bringing price, income and security incentives into closer alignment with needed changes in output and resource allocations. In this connection, the *bête noire* of planning officials was the instant and powerful political opposition aroused by any proposals for major changes in the structure of rewards and penalties.

The foregoing discussion suggests that the more thoroughly farmers had adjusted their operations to the going system of market incentives, the more they would feel threatened by, and therefore hostile to, substantial changes. In short, the very economic motivations which necessarily provided the means of redirecting agricultural production were already

harnessed by prevailing incentives to the preservation of the production patterns which had to be changed.

In conclusion, it is worthwhile to note the relation between the views on mobilization issues of farmers at large and those put forward at the point of effective negotiation and decision by the American Farm Bureau Federation and other major agricultural organizations. Important differences are bound to develop from time to time between the full-time organizational defenders of a general body of interests and the heavy majority of members who are too engrossed in personal matters to follow closely the intricacies of day-to-day tactical maneuvering for political advantage. But, especially in the case of organizations encompassing a wide heterogeneity of interests, these differences are more often traceable to the success of some narrow group in gaining disproportionate influence over the organization's policies. At any rate, it should be emphasized that serious differences between organizational pronouncements and the opinions of the membership are likely to emerge only when the membership is itself sharply divided over the policies involved. Such circumstances were not uncommon, for instance, during the 1930's. But the general unity of farmers on most agricultural issues during the war suggests that the official views of the Farm Bureau and other organizations were less significantly at odds with the opinions of their members on major issues than was claimed by those who assumed the continuance of pre-war disagreements between "the farm bloc" and most farmers on agricultural policies. Critics could still argue, and with some reason, that farmers might have been more receptive to the changes sought by mobilization programs if the leaders of all of the major agricultural organizations had vigorously urged such a course. But this does not absolve government officials from responsibility for much of the shortcomings in performance that developed—for these organizations were surely not so completely in control of farmers' opinions as to have blocked all possible direct efforts to gain their active co-operation by utilizing the enormous informational facilities and economic resources of the Federal government.

## 2. CONSUMERS

Overwhelmed by wartime shopping difficulties, unorganized, and devoid of authoritative spokesmen, consumers played only a minor role in the direct formation of wartime governmental policies. Such influence as consumer interests exerted on mobilization decisions affecting them was certainly less a product of overt consumer pressures for what they wanted than of prevailing beliefs in business and government as to the

limits beyond which the consumer could not be pushed without politically dangerous disgruntlement. Hence, in discussing the actual forces which had a bearing upon wartime economic planning, it is probably more relevant to review what consumer views were thought to be than what they actually were.

The elusiveness of direct evidence of the viewpoints commonly attributed in Washington to consumers necessarily confines the discussion which follows to a rather hazardous reconstruction, based on working backward from recorded policy discussions, decisions and rejected alternatives as well as on opinions gathered in personal interviews by the writer with government officials.

Consumer attitudes toward proposals for the wartime expansion of agricultural production were thought to be "strongly favorable". Inasmuch as consumer purchasing power had fallen short of farm output prior to the war, there was good reason to expect that a sharp rise in purchasing power would generate a strong upsurge in food demands. Wartime cuts in the production of a wide array of other goods which normally compete for the consumer's dollar were also expected to add somewhat to the demand for food. Given means as well as motive, therefore, it would have been singular indeed if consumers had not welcomed the prospect of rising food production. And in practical terms, politicians foresaw that every shortage in food supplies which could be attributed to governmental policies might work to the political disadvantage of the incumbent administration.

Although it was often asserted that, because of the tenacity of taste preferences, consumers would resist changes in the composition of diets, this was generally recognized to imply hostility not to all modifications but only to those which were distasteful. According to this view, consumption changes involving those adjustments commonly associated with rising incomes, such as increases in meats and dairy products and decreases in grain products and pulses, would be acclaimed as bringing diets into closer alignment with existing taste preferences, while changes in the opposite direction would be regarded most unfavorably. So it was assumed that consumers were actively demanding general increases in farm production and even heavier increases in certain products, like meat, which were substantially less efficient than many others in converting available productive resources into needed nutrients. Although consumers were thus being blamed for inciting farmers to disregard governmental appeals for converting production, only the most gingerly attempts were made to deal with the problem directly. Such a counter-move could have

involved the widespread organization of consumers to understand and give vigorous support to mobilization programs and the employment of a carefully balanced program of incentives and coercions to alter consumption patterns materially. Instead, the mobilization authorities sought to change consumption indirectly by the unlikely expedient of trying to persuade farmers to modify production patterns contrary to the pull of unchanged market demand. This choice of the more roundabout strategy may have been due to the fact that consumers are much more numerous than farmers, thus posing a far more difficult problem of education and organization. But it was probably also due in large part to the belief that consumers would be less likely to exact political reprisals for changes in diet patently due to changes in farm output than would be the case if changes could be traced directly to government dictation. And if the latter line of reasoning can be considered to operate in reverse as well, it might possibly have had some influence on the relaxation of rationing during 1944.

Despite repeated public opinion poll findings to the contrary, government officials as well as food distribution spokesmen adhered steadfastly to the belief that consumers would react strongly and unfavorably to any substantial reductions in the civilian food supply, even if undertaken to relieve hunger abroad. In support of this cautious policy, it may be noted that long experience with opinion measurement offers weighty evidence of the possibility of quite remarkable differences between public reactions to broad or summary propositions and to specific propositions logically inherent in the broader position. For instance, an overwhelming proportion both of the electorate and of politicians may be strongly in favor of reducing governmental expenditures; but itemized inquiry may reveal that they are opposed to reductions in each of the major categories of outlay. It was, accordingly, entirely possible that many people who voiced approval of reducing domestic civilian consumption in general might have grown increasingly restless over the daily frustrations of the resulting curtailed diet. On the other hand, such poll results did suggest ample grounds for seeking the fuller enlistment of consumers in support of mobilization requirements. Instead, responsible officials were apparently so thoroughly convinced of the necessity not only to avoid curtailing domestic civilian consumption but actually to raise it beyond previous peaks, that they reduced the proportion of available supplies shipped to desperately needy overseas claimants in order to make such domestic gains possible. Inasmuch as the government's own data proved that most of these increments were not necessary to bring average diets up to ac-

cepted nutritional standards, it is difficult to escape the conclusion that such policies were largely motivated by the belief that consumers, and presumably agricultural distribution interests as well, were either insistently demanding such unprecedented gains or were likely to express appreciation of such generosity in political or other significant terms.

There was no doubt, of course, about the desire of consumers to keep prices down. But this pressure to hold the price line was felt by some officials to be somewhat mitigated both by what was felt to be a generally lessened sensitivity to price rises in a period of rising incomes and by the obvious willingness to make use of the widespread and expensive black market. Under these conditions, the attitude attributed in policy negotiations to the absent consumers was often less that of unyielding resistance to all price increases than a combination of grudging acceptance of modest general increases plus a less hesitant willingness to accept even sharper increases in particular categories wherever these could be represented as the sole alternative to a reduction in the available supply of preferred foodstuffs.

In short, consumer attitudes were viewed as reinforcing farmers' enthusiasm for expansion, as supporting their hostility to a sharp curtailment of feed and livestock production, and also as providing a moderately pliable buffer against farm pressures for higher prices. There is no doubt that officials did give very heavy weight to these imputed opinions. Whether such estimates of consumer views were correct or not may never be accurately determined. At the very least, however, it must be conceded that consumers were obviously not sufficiently outraged by the resulting agricultural policies to compel the reorientation of official thinking. Consumer demonstrations in favor of less food production, or smaller allocations for domestic consumption, or sharp reductions in the output of livestock products were conspicuously rare. Even in respect to price increases, although consumers were patently displeased, more energy was probably expended by wage-earners during the war in using higher prices as a lever for promoting commensurate income increases than in active resistance to the price advances which materialized.

### 3. OTHER PRIVATE INTEREST GROUPS

Agricultural mobilization issues were also of direct concern to a number of other extra-governmental interests. The most important of these were the processors and distributors of farm products; the industries producing farm machinery, fertilizers and other agricultural supplies; and those other sectors of the economy which were competing with agri-

culture for materials, manpower and facilities. Although the first two of these interest groups were generally in closer accord with farmer reactions than the third, the views of each group on issues important to it seemed to be determined less by psychological affinities, or past habits, or even national mobilization desiderata, than by its own immediate and prospective economic interests.

As the connecting link between farmers and consumers in the flow of agricultural products, processors and distributors shared with them the problems of mutual adjustments, as well as the defense of common interests. Processing and distribution embrace so wide a range of specific functions, however, that significant differences emerged within this broad group on certain mobilization proposals. Such lines of cleavage usually appeared at whatever stage in the processing-distribution sequence represented the point of reversal between net advantage and net disadvantage in the anticipated effects of given policies.

Agricultural processing and distribution operations were molded, of course, in the image of the agricultural output patterns which they were designed to accommodate. Thus, the marked stability in the composition of farm output prior to the war led in turn to a parallel stability in the product allocation of processing and distribution resources. As a result, processing and distribution interests were as unenthusiastic about mobilization proposals for altering the composition of agricultural output as were farmers and consumers. Similarly, because short-term pressures from agriculture came primarily in the form of variations in production levels, processing and distribution facilities retained a reasonable measure of flexibility for adapting to such quantitative adjustments. The desire to take up this "normal" slack would alone have disposed these interests to join with farmers and consumers in favoring the expansion of farm production; but such a tendency was further strengthened by the fact that pre-war restrictions on production and marketing had left the capacity of processing and distribution facilities well in excess of agricultural output levels. It should be noted, however, that the hospitality of these groups to the expansion of agricultural output during the early years of the war gave way as the war moved toward its closing stages to an increasing fear of surpluses. Fear that both overseas and domestic requirements would decline abruptly after the termination of hostilities prompted distributive interests to show a growing lack of sympathy towards proposals for further expanding farm production during the later years of the war.

On another series of mobilization issues processors and distributors were generally aligned either with farmers or with consumers, though

sometimes with both. For example, since foreign food development programs threatened to encourage the growth of accompanying foreign processing and distribution facilities, such domestic interests were apparently no less reluctant than farmers to have our government aid in the establishment of potential post-war competition. And, as regards increasing withdrawals from domestic supplies in order to expand allocations for export, most distributors and many processors, too, seemed to hold with the unfavorable viewpoint attributed to consumers; some were opposed because withdrawals were being made before supplies had passed through their own stage of operations, while others feared or discovered in practice that direct dealings with government agencies resulted in lesser profits and subjection to closer controls. Reactions seemed to be even more mixed in respect to import policy. Those processors and distributors who felt that their operations were being limited by the insufficiency of domestic supplies tended to agree with consumers on the desirability of drawing on foreign as well as domestic sources of needed commodities. But others, generally those associated with earlier stages in the processing-distribution process, found their own operations by-passed by imports or found imports a source of immediate or future competition; and they, accordingly, supported the views of farmers similarly affected.

Processing and distribution interests stood united, though isolated from other groups, on issues of pricing policy and of reallocating available resources, but they were internally divided on distribution and rationing controls. Caught between the pressure of consumers to prevent additional price increases, and even to roll back those already effected, and that of farmers for still further advances, the processors and distributors sometimes sided with one, sometimes with the other, and on occasion openly fought both. The consistency of their positions was less evident from the standpoint of promoting the nation's economic stabilization and agricultural mobilization objectives than from the standpoint of preventing encroachments by either farmers or consumers on the customary margins considered to be the rightful due of processing and distribution employments. This course even led in time to the acceptance of subsidy payments by certain groups among them, probably less as a matter of preference than as a realistic means of adjusting to the powerful pressures encountered in the arena of market prices. It scarcely needs be added that, in the midst of the competitive scrambling for advantage pervading the entire economy, processors and distributors also sought to prevent or to minimize levies on their manpower and other resources, while they eagerly sought to benefit from any allocation of resources made available

for redistribution. Available materials fail to disclose any basis for generalization about processor and distributor reactions to rationing and distribution controls. Public statements, Congressional hearings and similar sources suggest that, while most groups may have preferred to be freed of controls, the fact of shortages led many, and especially those conducting smaller-scale enterprises, to fear the risks involved in such a course. Again, although some groups seemed to lay primary stress on preventing any extension of controls, many others appeared to be more actively concerned with augmenting existing controls in order to plug loopholes working to their disadvantage. Indeed, reactions in this sector resembled a bramblebush of highly particularized internal disagreements.

In view of their closely parallel interests, most producers of agricultural equipment and supplies were actively sympathetic with farmer demands on mobilization issues and, in turn, had their own wartime claims vigorously supported by farm groups. This may be illustrated by brief reference to the instance of farm machinery.

Farm machinery manufacturers entered the period of the war with two arduously and expensively developed assets: first, large bodies of plant facilities, of technological and managerial "know-how," and of trained personnel, all narrowly specialized in the interests of manufacturing agricultural equipment at maximum efficiency; and, second, a wide network of aggressive, experienced and well-financed distributors devoted to stimulating the demand needed to sustain production. Such producers were not only prepared to continue accustomed operations, but increasing market demand for their products intensified their eagerness to do so and provided a basis for attempting to justify such a course on the grounds of wartime requirements. Conversion may well have offered certain attractions as regards immediate returns to manufacturers alone. But an extensive change-over of farm machinery plants to the production of military goods would have threatened not only harrowing new burdens at every stage of design, tooling and manufacture, but a serious withering of the enormously valuable marketing channels which were patently useless in the distribution of tanks and other weapons. Under these conditions, it is hard to imagine any private industry's foregoing its right to fight for acceptance of its own conception of how it might serve most usefully; and it is correspondingly easy to understand why farm machinery producers actively favored the expansion both of farm production and of farm incomes. Moreover, with the basic composition of their output and the location of their distribution networks necessarily aligned closely with established farming patterns, these manufacturers seemed to share



farmers' distaste for proposals to effect abrupt wartime changes in the locus and composition of agricultural production. Accordingly, equipment manufacturers strongly resisted proposals for modifying substantially either the geographical distribution of new machinery or the going relative emphasis in production on different products. If domestic demand for farm machinery had fallen materially short of production, one may suppose that manufacturers would have been favorable, and farmers at least indifferent, to proposals for expanding the proportion of new production exported during the emergency. But with output continuing short of domestic demand, with domestic prices permitting adequate profits, and with their own distributive organizations to be strengthened by favoring the home market, farm machinery producers seemed to be as disapproving as farmers of proposals for expanding such exports.

In considering the foregoing, however, it should be noted that there was at least one indication that the pressure for expanding output which characterized farm machinery manufacturers was not entirely typical of the industries producing agricultural supplies. Although more fragmentary and hence possibly less representative, available data on the views of fertilizer manufacturers seem to be conspicuously lacking in evidences of resolute pressure for maximizing their output, and even suggest hesitancy or reluctance to push expansion beyond rather modest proportions as compared with demand and need. Fertilizer production did increase heavily during the war. But, according to careful estimates, farmers were eager to buy even greater quantities, and the agricultural mobilization effort would probably have benefitted more from such additional gains than from the substantial increases effected in farm machinery sales. In the face of such prospects, the only explanations suggested for the seemingly greater caution of fertilizer producers were the possible fear of burdensome post-war surpluses of capacity if demand should eventually slump, and the possibility that additional capacity financed by the government might, under farmer pressure, lead to the further incursion of government operations into the production and distribution of fertilizers after the war.

Summarized briefly, in view of extended discussions earlier, it may be noted that the industries competing with agriculture for productive resources were bent on reducing its allocations of manpower, materials, machinery components and manufacturing facilities. In campaigning for such ends, pressures were exerted by such industries which aided the efforts of government officials seeking to advance mobilization programs. It should be recognized, however, that such undertakings by non-agri-

cultural industries were motivated more immediately by their own urgent desires to augment the resources allocated to them. There were many instances, of course, in which industrial groups sided with government officials in meeting mobilization needs, but such co-operation generally materialized only within the limitations determined by the direct economic interests of the groups so involved. Instances in which such co-operation was voluntarily forthcoming, in spite of prospective substantial disadvantage to those taking part, were strikingly less common.

## CHAPTER XVIII

### PLANNING AND INTRA-GOVERNMENTAL CONFLICTS

OUR Federal government in action represents a congeries of co-operating, competing and conflicting interests. Often divided at the very top by major disagreements between the President and the Congress, it also not infrequently exhibits the triumph of centrifugal forces even within the Executive establishment. Charged with standing above the struggles of geographical, economic and other special interest groups in order to resolve conflicts among them, it commonly presents, instead, the spectacle of a free-for-all among governmental allies of each of the contending factions plus others pressing specialized bureaucratic interests as well. Supposed to be devoid of personal interests, government at work is actually pervaded by rivalries among its employees rooted in the drives of the ambitious, the insecure, the idealists and others. Indeed, it is difficult to appraise the potentials and problems of national planning without bearing in mind that, in its functioning, our government bears little resemblance to a mechanism objectively weighing alternatives and automatically choosing those promising the greatest benefits to the nation at large. It may more accurately be envisioned as an aggregation of people steeped in the strivings, power-orientations and value divergencies of our culture, and but imperfectly restrained from acting accordingly by the formal rules of organization.

It is not within the scope of the present study to undertake any detailed mapping of the conflicting motivations interlacing the fabric of government. An effort will be made, however, to probe for some of the underlying sources of intra-governmental frictions which appear to have had a significant bearing on the course of agricultural mobilization.

#### I. CONGRESS VERSUS THE EXECUTIVE BRANCH

Nowhere within the government were disagreements over issues of agricultural mobilization sharper than between the Congress and the Executive agencies—on production, distribution, rationing, prices, manpower, farm machinery, exports, all along the line. Proposal after proposal for strengthening wartime controls, for facilitating and encouraging conversion, for increasing the utilization of available resources, and for otherwise implementing mobilization purposes was submitted to the Congress and rejected. Appropriations for a variety of programs deemed

urgent by responsible agricultural officials were curtailed or denied. Measures initiated by the Department of Agriculture and the War Food Administration, and official pleas to enlist the co-operation of farmers, were frequently derided or denounced in the House and Senate. Moreover, an astonishing array of standing committees, special committees and sub-committees of both branches of the legislature investigated and re-investigated any number of agricultural issues, clogging the calendar with hearings, harassing officials with innumerable calls for testimony, and often seeming to display less interest in a judicial examination of facts and practicable alternatives than in providing a sounding-board for destructive criticisms of the Executive agencies and their programs. Of course, some measure of hesitation, skepticism, rivalry and outright disagreement can scarcely be avoided in relations among the component parts of a checks-and-balances system. What was truly dismaying about the relationship between the Executive and the Congress in respect to agricultural mobilization was the consistency of obstructionist tactics. Many legislators voiced sustained distrust of the professed aims of Executive proposals and seemed intent on employing the not inconsiderable arsenal of weapons available to them in order to frustrate major Executive policies and programs.

Analysis suggests that the wide array of factors having some bearing on the basic disagreements between the Congress and the Executive over wartime agricultural issues may be classified into three categories: those reflecting considerations of party politics; those reflecting currently differing conceptions of aims and needs; and those reflecting more persistent, and perhaps inherent, differences in the primary interests of these two bodies. Public discussion at the time seemed to attribute the friction overwhelmingly to the first of the three, possibly because manifestations of party politics are so characteristic a feature of controversies over governmental policy, and are so readily identifiable as such by the open labeling of the participants. But less familiar, less obtrusive, and more complex causations seem to have played an even more significant role.

Partisan political differences have ordinarily exerted an important influence on relationships between the Congress and the Executive, especially because they are generally not tolerated within the Executive to any significant degree. Efforts to promote the interests of one party at the expense of the other have often shown less emphasis on outdoing the opposition in terms of constructive contributions than on the destructive tactics of seeking to minimize the other's achievements through criticism, delay, augmenting existing obstacles and similar means. And yet,

important as the welfare of the party may have been to its representatives in Congress, it is difficult to accept such motivation as sufficient to explain the continuation of peacetime tactics of non-co-operation and open harassment in time of war. At the very least, it would seem necessary to assume that those still preoccupied with seeking partisan advantage were convinced that the war effort would not be seriously harmed thereby. In addition, realism suggests that those opposing Executive efforts to intensify mobilization programs would probably not have entered upon so risky a political course had they not had reason to believe that their actions would not cause resentment among the electorate at large, and might even be viewed with favor. In this sense, party politics during the war may be viewed as reflecting the jockeying of interest groups in the economy at large which, as has already been seen, played so large a part in influencing the character and tempo of mobilization.

Even more important than partisan politics as a source of differences between the agencies concerned with agricultural mobilization and the Congress was their basic disagreement over the scale of wartime needs deemed urgent enough to warrant the imposition of additional burdens upon American producers, distributors and consumers. This view also finds some support in the fact that much of the opposition to Executive proposals was broadly bi-partisan. The extent of mobilization burdens, it will be recalled, is determined by the expected increment in wartime needs. Such needs are determined, in turn, by the objectives which are thereby to be served. And, in the case of agriculture, Executive estimates of the scale of needed mobilization were determined primarily by the immediate and prospective requirements of Allied and liberated areas, as well as of other overseas claimants, rather than by domestic needs. Accordingly, one had but to shrink back the criteria of admissible need in order to find it possible to lift proportionate burdens from our economy and, hence, to justify rejecting as unnecessary the greater part of Executive proposals for agricultural mobilization.

Substantial differences between Congressional and Executive estimates of need, however, had necessarily to rest on basic differences in the scope of needs encompassed by them. In practical terms, the only means of effecting sharp reductions in the prospective wartime increment in agricultural requirements were either to cut back the level of proposed exports or to contract the period for which they would continue. The first alternative would have entailed cutting deeply into actual wartime shipments to the Allies, and especially to liberated areas. The most important savings offered by the second were those to be achieved by con-

fining consideration to overseas needs only until the end of hostilities; but this would have disregarded all post-war aid aimed at hastening economic recovery and the restoration of political stability, except insofar as such an optional outlet might ultimately prove convenient to dispose of whatever domestic surpluses might prove unmanageable during our own reconversion. Congressional willingness to adopt either of these two limited expedients could not but reflect strong, though not necessarily conscious, over-confidence or isolationism in the eyes of mobilization-minded leaders of the Executive. The latter looked askance at all efforts to curtail exports or to inhibit the intensification of wartime measures designed to expand exports to levels more nearly commensurate with urgent requirements. All such limiting policies were seen by proponents of all-out mobilization as deriving from one or another of the following short-sighted views: that the U. S. could manage as well or better during the war without bothering to help the Allies or other friendly areas; or that, while some aid was obviously necessary, it should be held to even more meager levels, and should be given only to those actively engaged in hostilities; or that, the U. S. should, in any case, wash its hands of the Eastern Hemisphere and its perennial problems as soon as the fighting was concluded.

It should be recognized, of course, that such elaborate reasoning as the foregoing overlooked the probability that numerous legislators may simply have pressed stubbornly for cutbacks in exports and in mobilization measures not because of any strong attachment to the beliefs imputed to them above, but because of an over-riding determination to do anything necessary to ease the burdens and to increase the well-being of domestic farmers, distributors and consumers. But, whatever the explanation, the basic differences between the Executive and the Congress were traceable far more to conflicts over objectives than to disagreements over how to effectuate jointly accepted ends.

In addition to considerations of political partisanship and to dissimilar conceptions of the extent and kinds of wartime urgencies, there were also differences between the Executive and the Congress in respect to agricultural mobilization policies whose roots lay deep within the fundamental division of functions prescribed for each under our Federal government. Among the lesser of these persistent causes of a rivalry which is at least edged with bitterness are personally and politically motivated efforts by each to take credit for such measures as prove widely popular and to shift blame for those that prove burdensome or ineffective. Possibly more important is the mutual envy which seems quite common on both sides.

Thus, many legislators feel a heart-burning envy of the "bureaucrats" who, though never exposed to the tribulations of keeping rapacious constituents mollified, or to the risks of periodic elections, nevertheless enjoy honorific status and, often, long tenure; who get "inside information" on important developments, have huge sums to disburse, many vacancies which can be filled with an eye to furthering personal and political aspirations, and large staffs of legal, economic, public relations and other experts to help advise them on the more vexing issues; and who, it is believed with unalterable conviction, have the power, and use it, materially to alter legislative intentions in the process of carrying out Congressional directives. And these same "bureaucrats," in turn, aware of the frustrations of their own jobs, tend to be no less resentful and envious of the power of legislators to establish guiding policies without regard to the burdens entailed in seeking to carry them out; they envy the legislators' freedom from crushing administrative burdens, their power to harass and even to humiliate appointive officials, their comparative freedom to act in accordance with personal and political impulses, however contrary to the import of careful study and fact-finding, and their freedom to criticize and denounce Executive measures publicly without having to prove, or even to bother to investigate, the accuracy of their allegations; and, by no means least, the bureaucrats envy Congressional control over appropriations, which almost invariably places the appointive official in the position of a supplicant subordinate.

Related to the foregoing, and highly significant as a continuing source of friction between the Congress and the Executive, were the untiring efforts of each to extend the sphere of its powers over the ill-defined boundary between them. Most common among the expedients resorted to by legislators have been such practices as the following: squeezing down the discretionary powers permitted to the Executive; seeking to influence personnel appointments; seeking to have administrative procedures and rulings modified to the advantage of their own constituencies; edging in towards supervising Executive operations in their home districts; and attempting to use appropriations as a means of coercing or punishing unsubserving officials. Nor has the other side been inactive on this front, with Executive officials often accused of interpreting formal legislation so as to bend and broaden, if not actually to contradict, avowed Congressional intentions; of entering into expenditure commitments bound to exceed allotted appropriations and hence all but forcing the Congress to grant additional funds through deficiency appropriations; of permitting and even encouraging local officials of their agencies to give

aid and comfort to the political opponents of incumbent legislators; and even of instigating public pressure on Congress to alter current legislative policies. That such continuous efforts at trespassing on one another's functions should engender mutual suspicion and rivalry is hardly cause for astonishment.

But perhaps the most important of all the long-term factors tending to provoke disagreements between the Executive and the Congress are those which have wrought a fundamental differentiation in the objectives around which their advocacies tend to cluster, and which mold their criteria for appraising what needs to be done and what has been done. One such influence is the dissimilar patterning of their responsibilities. A second is the divergent sources of their respective authorities. Together, such differences have tended to pit narrowly regional viewpoints against narrowly functional viewpoints, an interest centered in the welfare of the individual citizen against one centered in the national welfare.

Differences in the essential patterning of responsibilities are readily apparent from the fact that while the Congress consists of legislators representing particular geographical segments of the country, the Executive establishment is composed of agencies devoted to functionally grouped problems. As representatives of specific areas, Congressmen and Senators must integrate their thinking about a wide array of issues within a narrow regional focus. Whether a need is urgent or not, whether a proposal is desirable or not, whether a measure has been beneficial or not tends to be evaluated by each primarily at the level of his own election district's interests. But within that focus, each can see in reasonably broad perspective the full array of problems that constitute the business of government. Officials of an Executive agency, on the other hand, are necessarily concerned with a much narrower array of problems bearing on a much wider geographical area. In place of an exaggerated concentration on developments in some one small part of the country, therefore, they must broaden their view to encompass the entire country, seeing the problems of all sections in proper perspective, uncovering major patterns, and weighing net advantages and disadvantages in terms of large regions and in terms of aggregates for the country at large. During the war, their view had to be broadened to encompass the greater part of the earth's surface. But narrowness of problem focus can be as much a source of distortion in viewpoint as narrowness in geographical focus; in viewing the place of their tasks within the larger framework of governmental concerns, officials of the Executive often see their functions as more important, their achievements as more significant, and their needs as more



urgent than would appear warranted either to their colleagues in other Executive agencies, or to most legislators, or, for that matter, to most citizens. As a result of such differing orientations, legislators are apt to hammer away at Executive programs and proposals in terms of interests so narrowly conceived geographically as to threaten distortion of both the purpose and the achievements of nationally projected undertakings; while Executive officials are forced by the geographical breadth of their responsibilities to concentrate on a level of inclusive aggregates which are but a secondary concern to legislators tied to highly localized interests.

Dissimilarities in the sources of the authority of legislators and of Executive officials also contribute to the exacerbation of their viewpoints. The legislator, deriving his from the voters, tends to emphasize his mandate to protect and enhance the welfare of the individuals and actively organized groups in his own constituency. The Executive official, deriving his through the apparatus of Federal government from the President, who has been chosen by the electorate at large, tends to be concerned primarily with problems and results at the level of the national welfare. Here again, the viewpoint of the one is essentially atomistic, that of the other aggregative; the one emphasizing "the people," the other the individual persons in his constituency. Indeed, the legislator is not infrequently led to assume a position analogous to that of a lawyer seeking to press the special claims of his clients, with the Executive official assuming the defense of the whole community's interest as over against that of any individual seeking special dispensations.

Of course, theoretically, by and large, and in the long run, these two viewpoints should merge into congruence. But in practical terms, in specific cases, and in the here and now, the differences tend frequently to be substantial, and they have enormous significance for national economic planning. Such planning is concerned largely with the reallocation of resources and the redistribution of resultant goods and services. In some instances, and for brief periods, all sections of the nation may be affected similarly, as when heavier demands are made on everyone, or when all are asked to share a reduction in supplies made available for consumption. But in by far the greater proportion of nationally planned undertakings, attendant reallocation and redistribution involve taking disproportionately from some regions, groups and individuals and giving disproportionately to others; or disadvantaging some through disproportionate burdens and advantaging others through disproportionate returns. In respect to securing the adoption of such proposals, the polarization of Executive and

Congressional viewpoints noted above will tend to constitute an additional serious obstacle in the eyes of proponents, and an additional defensive barrier in the eyes of opponents.

The pattern of Congressional reactions to wartime agricultural issues which emerged from this complex of bases for disagreement with the Executive may be summarized briefly as follows: In broad terms, that sizeable and influential sector of the Congress that was responsive to political pressures from agriculture seemed to be more intent on stripping away the comprehensive web of controls developed during the New Deal period than on strengthening wartime controls; more interested in protecting agriculture from heavy levies that would benefit other sectors of the war economy than in maximizing agriculture's contribution to the common war effort; more concerned with promoting agricultural prosperity than with promoting agricultural mobilization. More specifically, their prevailing attitudes seemed to include a decided preference for permitting, rather than forcing, an expansion in agricultural output; disapproval of efforts to coerce farmers into substantially altering the composition of production; strong resistance to attempts to curtail the resources made available to agriculture or to modify their customary distribution; opposition to aiding foreign food production development programs which might eventuate in greater competition for domestic producers; grudging acceptance of rationing and distribution controls, combined with an insistent desire to have their extent and duration minimized; mounting demands for the curtailment of overseas shipments not only of food but of all resources in short supply domestically relative to demand; and an unenthusiastic acquiescence in the need for price controls, accompanied by a desire to ease its impact on a wide array of producing groups, especially farmers.

These pervasive disagreements between the Congress and the Executive seriously hampered efforts to intensify agricultural mobilization. Equally significant from the standpoint of practical national planning, however, was their over-all tendency, as the present study copiously shows, to force the planning efforts of Executive agencies into increasing conformity to Congressional desires.

In part, the forward drive of mobilization planning was throttled by the outright refusal of the Congress to grant certain of the additional powers sought by the Executive. Some observers argued that such limitations were not as critical as they seemed, in view of the broad powers already conveyed to the Executive by legislation enacted in the past and never withdrawn. And it must be conceded that a very impressive array

of incentives and coercions might have been fashioned within the framework of past grants of authority. Nevertheless, the suggestion that such technically held powers could have been used to introduce wartime measures known to be strongly disapproved by the Congress is highly unrealistic; any such misguided effort would only have invited the prompt termination by Congress of the powers thus invoked, or the withholding of further appropriations. But the conclusion may not be avoided that the Executive was guilty of contributory weakness. The apparent readiness of the Executive to retreat in the face of Congressional hostility was far more influential in hobbling agricultural mobilization than was its inability to gain additional immediate powers. Timid officials even minimized the use of powers that were clearly and irrevocably theirs to actively champion the needs of agricultural mobilization, to foster increasing understanding of the scale and urgency of such requirements among farmers and the public at large, to call attention to what had to be done and the most effective means of ensuring that such would be done, and to keep emphasizing the extent of current shortcomings and the probable effects of their continuance on our foremost war objectives.

The crumbling of Executive opposition to Congressional views on wartime agricultural issues has been blamed by some on the manifestly superior strategic position of the Congress in the short-run, in view of its crucial powers of control over legislation and appropriations. And yet our form of government would never have been characterized as a system of checks and balances if a failure to resolve disagreements between the Executive and the Congress through direct negotiations had automatically required the former to abandon its demands. On the contrary, where the issues are considered to be important, it is incumbent on the Executive to pursue the struggle on into the political arena, with each of the contenders having to seek effective popular support for its views. Others were probably on stronger grounds in attributing the deterioration of the Executive's espousal of mobilization measures, first, to the fact that most agricultural and other organizations actively lobbying on agricultural matters in Washington were urging the Executive to embrace the views of the Congress, instead of exercising pressure in the reverse direction; and, second, to the fact that the public at large was considered to be sympathetic with the Congressional position, or, at any rate, to be sufficiently uncertain or indifferent to prevent its offering the Executive an effective counterweight to such lobbying. Important as these considerations were, however, they, too, failed to give adequate weight to the responsibility for initiative and leadership of the Executive in our government. The

Executive is possessed of incomparably comprehensive channels for collecting information about latent, embryonic or newly emerging developments and also of an extraordinary array of experts to help evaluate the significance of such prospective developments—especially in the realm of overseas matters. It would be astonishing, indeed, and a severe indictment of the Executive, if it were, nevertheless, unwilling to fulfill its duty of exerting itself to the utmost to make known its findings and judgments, however distasteful they might be, to outline what should be done, and to keep urging the introduction of whatever measures and policies are deemed necessary in the national interest. In the final analysis, therefore, it would appear, without slighting the practical force of the preceding considerations, that the crippling of agricultural mobilization was due in greater measure still to the sapping of the Executive's exercise of forthright and vigorous leadership. And this, it will be seen below, was largely the product of conflicts among competing interests within the Executive establishment.

## 2. INTER-AGENCY DIFFERENCES WITHIN THE EXECUTIVE BRANCH

The Executive arm of the Federal government encompasses a huge apparatus of agencies; and these were augmented in wartime by hastily assembled new agencies cross-cutting the responsibilities of those established earlier. It would be unrealistic in the extreme to expect uninterruptedly harmonious relations under these circumstances. Changing problems, policies and personnel, the latter especially in the higher echelons, cannot but engender some degree of strain and turmoil in the process of adaptation. Nor can misunderstandings and minor differences be avoided in the ceaseless functioning of highly intricate organizations working under emergency conditions. These comparatively normal concomitants of large scale administration are of less significance for appraising the problems and potentials of practical governmental planning, however, than the major differences representing conscious disagreements which persisted in asserting themselves in spite of the formal pressures for unity within the President's command. Differences of this order arising from competing interests within the individual agencies will be discussed later. Attention will be turned first to such of these differences as appear to stem from sources operative at the inter-agency level.

Major differences among Executive agencies covered almost the entire range of prominent agricultural mobilization issues. These included farm production, the manufacture of agricultural machinery and other supplies, farm labor, distribution, domestic consumption levels, allocations

for export, and prices. The existence of such disagreements was openly acknowledged, and even vigorously publicized. Their persistence clearly undermined the position of the Executive in relations with the Congress, with organized pressure groups, and with the public at large; and the fact that they continued despite Presidential orders that they cease indicates the seriousness of the power issues that lay behind them.

The causes of inter-agency policy disagreements most frequently mentioned during the period were, first, what may be termed "organizational imperialism", and, second, duplication. Both of these common bureaucratic tendencies were involved; but close study suggests that both may more properly be considered as symptoms, rather than causes, of basic policy differences among agencies.

Organizational imperialism—the target of so much labored humor and sarcasm—is supposedly the product of the insatiable hunger of each government agency to grow by swallowing parts of other agencies. Available evidences of such phenomena, however, suggest that the primary objective is growth, not cannibalism, and, moreover, that efforts to take over responsibilities already assigned to other agencies have been among the least promising and least frequently exploited means of seeking to expand existing agencies. Pressures for expansion are generated, of course, not by an agency but by its officials; and the latter in turn acquire the habit from the larger society in which government operates. In general, however, such personal ambitions of government officials as seek outlet in agency expansion seem to center almost wholly on seeking to gain the assignment of functions already recognized as useful, not yet allocated, and not so clearly destined for some particular agency as to discourage or debar such competitive snatching. Accordingly, such inter-agency disputes as could properly be attributed to "imperialistic" impulses were far more likely to involve differences over the organizational allocation of a given program than clashes over basic policies. Such policy clashes did occur, needless to say, but they were much more often the cause than the product of inter-agency disputes about organizational matters.

According to the prevailing stereotypes, largely propagated by opposition politicians, duplication in the Federal government was widespread, costly, confusing and otherwise wholly reprehensible. A careful examination of available evidence does confirm the existence of duplication, but to far less a degree than is commonly assumed, seldom in the forms normally associated with the term, and where it existed it often served quite useful purposes. If duplication in government is defined as the con-

duct by different agencies of action programs or line operations which are essentially overlapping in respect to the population groups and areas served as well as the functions performed, duplication is rarely to be found. On the contrary, the forms in which it does appear most frequently are those which lie within the shadow-belts of sound organizational theory—particularly within the zones of uncertainty between the extremes of concentration and decentralization, between laudable competition and wasteful duplication, between creative independence and authoritative integration. There is no reason to suppose that the particular compromises between such opposing considerations which actually emerged were necessarily the most fruitful; but neither were they incontestably inferior to practicable alternatives. For example, a wide array of exactly similar housekeeping functions and administrative services were performed in each agency, with demonstrable advantages over excessive centralization. Again, a number of agencies operated in the same regions of the country, but, dealing with different segments of the population or performing quite dissimilar functions, offered some reasonable argument for avoiding the insularity of viewpoint which might well have resulted from overly vigorous integration on a regional basis.

In all probability, the activities which most closely approximated popular conceptions of duplication concerned the staff functions involved in policy formation. Each agency had a staff of technical experts engaged in analyzing current and prospective problems and policy alternatives in order to advise the agency director on pending decisions. In the main, each agency dealt with a distinctive array of problems. But many issues, including some of the most important ones, cut across or had a significant bearing on the responsibilities of several agencies. In dealing with these latter, it is probable that the advisory staffs in each agency were engaged in appraising similar data and similar alternatives in technically similar ways. Duplication? Certainly, but not necessarily wasteful—unless it be considered wasteful to give careful attention to the views of each of the agencies capable of contributing to the rounded consideration of the problem, both by adding the results of its own superior knowledge of, and experience with, certain parts of the problem, and by pressing recommendations based on its own specialized, but usually important, interests. Without at all implying that such practices could have been extended to extreme lengths without entailing waste, nor even that wartime arrangements were wholly free of needless overlapping in these areas, it is apparent that overly zealous prevention of “duplication” of the character just discussed would constitute the suppression of much-needed creative com-

petition in the analysis of national problems and in the development of effective policies for dealing with them. Thus, one may argue with some cogency that organizational duplication was more frequently the product than the cause of overlapping problems, and that inter-agency policy disputes were more frequently a product of overlapping problems than of duplication in organizational arrangements.

More important than the factors thus far discussed as causes of major inter-agency policy disagreements during the war were the following: the far-reaching ramifications of most basic issues of national policy, usually affecting several agencies and being entangled with a number of other basic issues as well; the differentiation of agency responsibilities, which could not but lead to correlative differences in evaluating the relative importance of different interests and the relative desirability of alternative measures; and the absence of a common core of assumptions among the officials of different agencies regarding the Administration's basic objectives, expectations and strategic plans. The first of these made conflict possible, the second virtually assured it, and the third provided an unnecessary additional source of disagreements.

As illustrated abundantly in earlier chapters, most major issues of wartime agricultural policy were of direct concern to a considerable array of the agencies enmeshed in the complex mobilization program; and their fight to participate in decisions was one of the early causes of sharp inter-agency disputes. Efforts to make decisions without consulting the other agencies affected led inevitably to recriminations, contradictory measures by those which had been ignored, and increasing disorganization. It was not possible to keep reorganizing the government so that agency responsibilities would divide exactly along the boundaries of major problems, for old problems kept assuming new forms, additional problems kept arising, problems kept getting ensnarled with one another, and the points of critical urgency kept shifting. In time, the unsatisfactoriness of the makeshifts which had evolved forced recognition that arrangements had to be made for ensuring periodic or continuous consultation among all relevant agencies. The outcome was the establishment of an expanding structure of formally organized committees. This form of coordination was not chosen because anyone considered it preferable to straight line organization, but because of a reluctant admission that the latter had proved inadequate in the handling of inter-agency relations; this finding was strikingly paralleled by emerging developments within large business enterprises, where the power of arbitrary action in respect to interstitial and cross-cutting problems is presumably

less limited. And with our growing awareness of the intricate inter-relationships among all parts of our economy, it does not seem improbable that the future will see increasing reliance in planning as well as in administration on this means of binding together the numerous agencies of our Executive establishment.

It may be noted in passing that under the pressure of mounting urgencies the latter part of the war witnessed a brief re-assertion of old rough and tumble habits with the appointment of several all-powerful "czars" to effectuate certain critical programs by over-riding or ignoring all competing interests. The results were hardly a cause for unalloyed gratification, however. As might have been expected, the czars' achievements were bought at the cost of hindering and disorganizing other urgent programs—thereby actually multiplying the number of crises to be dealt with.

Once granted participation, however, agencies were at last in a position to give effective expression to the full range of their differences. Because of its specialized interest and experience, each agency tended to lay greatest stress on its own part of the given problem. Each pressed hardest for the remedies utilizing its own powers. Each sought to insist on acceptance of its own estimates of needs and possible results in its own sector of the economy. Above all, each resisted bitterly proposals which would have further burdened its own resources and those of its sector of the economy, urging in their stead measures which would have eased their own problems by increasing those of others. And all the tactics of negotiation were brought into play: inflating demands in order to leave room for bargaining; teaming with other participants to promote mutual interests; challenging the facts, the premises and competing claims; and threatening, stalling, and so on. In due course, organized procedures were devised for handling appeals by higher-level committees. What should be emphasized, however, is that agencies do see problems differently, do have dissimilar bases for evaluating alternatives, do have responsibility for protecting the interests of particular segments of the economy, and, therefore, without in any way infringing their devotion to the national interest, tend to have proper and, indeed, unavoidable grounds for differing in respect to proposed policies.

The third of the more significant causes of inter-agency policy conflicts, and the least justifiable, was the failure to subscribe whole-heartedly to a common basic mobilization strategy. As a result, the various agencies supposedly committed to the faithful execution of the Administration's basic mobilization plan were actually permitted to develop, and act in



accordance with, quite differing interpretations of what such guiding expectations and principles might be. Wide differences were to be found in their several estimates of the probable duration of the war, the scale and timing of prospective requirements, the degree of political risk to be incurred in the furtherance of mobilization objectives, the relative importance of different parts of the over-all program, and the probable character of post-war needs. Although disagreement was possible as to which answers time would prove to have been best regarding any of these knotty matters, there was little excuse for uncertainty as to the Administration's views in respect to such basic determinants of forward planning. Precisely because such premises were of critical importance in shaping policy planning, it was obvious that continued disagreements at this level would generate widening disagreements at each succeeding level of planning and administration.

In general, the position taken by the agencies involved in policy conflicts approximated what would be expected from the considerations reviewed above. The pressure for more far-reaching efforts to mobilize agriculture came primarily from two non-agricultural groups: those agencies which were responsible for aiding allied and friendly nations overseas, and hence pushed for maximizing the output of needed food-stuffs; and those agencies which were concerned with increasing the production of manufactured war goods, and hence fought for curtailing agriculture's share of available resources as a means of increasing the supplies made available to industry. Leading agricultural agencies, on the other hand, seemed more concerned with minimizing the burdens of agricultural interest groups than with maximizing the achievements of agricultural mobilization.

### 3. COMPETING INTERESTS WITHIN EXECUTIVE AGENCIES

Further exploration of why the central thrust of agricultural mobilization agencies was not directed toward intensifying the mobilization of agriculture requires some examination of the role of competing interests within an Executive agency. The Executive agency is the fundamental operating unit of government. In it must be faced both the basic problem of democratic government—the resolution of conflicts between the determination by technical experts of what would be best for the nation and what the politically effective majority of the citizenry want—and the basic problem of administration—the resolution of conflicts between the best interests of the organization and the individual employee's conception of his own best interests. Assuming that the former of these respon-

sibilities is also coincident with the proper interests of an agency of government, this patterning of competing pressures may be reformulated as a three-way conflict among objective research and analysis, political expediency, and personal ambition. Each has a direct bearing on operating policies. None can be eliminated, either through wisdom or coercion. Accordingly, the practical aim of constructive administration should be to remain continuously aware of the pressures exerted by each and to keep their relative influence in reasonably proper balance.

Personal motivations are a major determinant of the efficacy of governmental organizations as tools of national planning. They affect the exercise of initiative and critical judgment, responsiveness to authority, receptivity to change, and the development of standards of performance. In turn, they affect every stage of the planning process from the formulation of conceptions guiding the estimation of needs to the vigor of program execution.

With the fulfillment of his aspirations towards increasing influence, prestige, income and security so largely within the control of his superiors, the employee has quite compelling reasons to subordinate his own beliefs and preferences to the demands made from above—and this is, in fact, the primary source of discipline in voluntary organizations, whether in business or government. Sight should not be lost, however, of some of the more questionable concomitants of such a system of relationships. The employee who is eager to please may tend to become increasingly careful to cloak his own views until those favored by his superiors are made known. And, thereupon, he may tend to concentrate more on helping to strengthen the case for the views handed down from above than on subjecting them to objective evaluation and criticism. And the employee who is temperamentally unable or unwilling to accede to such pressures may be coerced into leaving, or be sealed off in routine work where his non-conformist impulses will be of little consequence. No less serious than this tendency for subservience to choke out initiative and creative independence is the accompanying tendency to isolate the leadership from a thorough understanding of the problems and attitudes being encountered at the successive levels of program application down to the grass roots. Criticisms, shortcomings and difficulties can no more easily rise up through an organization chart under such conditions than water can flow uphill. The employee who is always trying to make the best possible impression on his superiors is likely to screen out evidences received from his subordinates which he feels may possibly be interpreted as reflecting unfavorably either on his acceptance of official policies or on

his ability to carry them out. Much is bound to be lost through straining reports from the outermost tentacles of the organization through the fine-meshed screens of personal interest operative at each level in the managerial hierarchy.

While each of the foregoing factors seem to operate more to discourage than to encourage initiative, imaginative thinking, and the fresh appraisal of alternatives, they at least tend to increase responsiveness to changes directed from on top. It should be recognized, however, that such sensitivity to leadership tends to be dampened by some of the means employed to enhance personal security. One major source of organizational inertia is the momentum of past experience as it manifests itself in the skills and habits of thought of older employees. Such veterans cannot but take a hostile view of major changes which not only challenge their conceptions of soundness but also serve as threats to existing functions and managerial arrangements. Moreover, it is precisely in organizations where major changes are most likely because of changing problems and personnel that security-conscious officials and employees will be conditioned to avoid exhibiting notable devotion to the promotion of new policies, lest they be considered partisans of measures which, as long experience has shown, are bound to be changed again, perhaps in the near future. Another factor tending to decrease organizational responsiveness is the establishment of job security guarantees which, while capable of safeguarding some remnants of independence, may also provide refuge for those animated by hostility or sloth.

Much of the foregoing is embraced in common usage under the term bureaucracy and is considered a unique attribute of government, though convincing evidence is lacking that large business and other organizations are more free of these problems than the civil service. But appraisal of our governmental machinery as an instrument for national planning must include the exploration of such inner frictions, whether rooted in personal motivations alone or a product of conflicts between personal motivations and considerations of national welfare and political expediency. Discussions of governmental functioning often imply that civil servants are, or should be, a caste apart—a group devoid of personal interests and ambitions, interested only in service. Such views, however, certainly do not accord with the basic premise of our culture that inter-personal competition is the best means of promoting progress and efficiency; nor do they support the widely-held belief that government's greatest need is to become more business-like. At any rate, whatever may be the theoretical

ideal, the serious observer cannot as yet ignore considerations of personal motivation in seeking a realistic understanding of our governmental processes.

Attention may be turned next to the pressures exerted by technical research and analysis, whose role in promoting appropriate governmental policies is readily outlined. Confronted by some major problem, it is the task of the technical experts, who comprise by far the greater part of the professional staffs of government agencies, to estimate the character, scale and timing of needs, and to determine how much could be done to meet them, and by what means. Relying overwhelmingly on objective measurements and on technically accepted methods of estimation and appraisal, the combined efforts of scientists, engineers, economists, administrative experts and other technicians tend to eventuate—after the compromise of internal differences—in the definition of probable requirements, and in the recommendation of policies for action which have been deemed to satisfy the tests of physical, economic and administrative feasibility. Presumably, such findings represent the best available technical judgment of the course which would best serve the interests of the nation. No one, individual or nation, is willing always to do what the doctor says would be best in the long run. Nor would many of us willingly surrender the right to make certain of these choices. But such technical findings are certainly a necessary, if not wholly dominant, consideration in choosing a course of action which has any pretensions to soundness beyond the attainment of momentary advantages.

In private business, a prospective increase in production or in operating efficiency is generally not considered to justify basic change unless it results in lowering rather than increasing unit costs; and a prospective decrease in unit costs is not considered to justify basic change unless it leads to an increase in profits. In government, a prospective improvement in meeting needs or in increasing the efficiency of operations is generally not considered to justify basic change unless it results in increasing popular support of the incumbent administration; and a prospective increase in popularity is not considered to justify basic change unless it promises an increment in effective political support. Thus, just as issues of business policy tend to be resolved with primary emphasis on financial rather than technological considerations, issues of governmental policy tend to be resolved with primary emphasis on political rather than economic or other technical considerations. And while these differing criteria are generally supposed to coincide in the long-run, there can be little doubt that in the shorter-run they engender quite markedly divergent

viewpoints. In the case of agricultural mobilization, disagreements between technical and political judgments represented one of the major sources of intra-organizational policy conflicts, as well as one of the most nettlesome problems of practical planning.

But determinations of political feasibility are themselves subject to great uncertainty, and hence often proved to be another potent cause of internal disagreements. In assessing political feasibility, what relative weighting should be given to the probable reactions of the nation at large, of those sectors most directly affected by proposed measures, of the Congress, and of the organized pressure groups actively concerned? Within what time perspective should political feasibility be estimated? Under what conditions may considerations of political feasibility be subordinated to those of need?

In practice, the determination of political expediency by weighing the relative importance of reactions in different sectors of the political firmament seems to involve consideration not only of the numbers encompassed by each, but also of their knowledge of, and interest in, the issues under study, their capacity to exert organized pressure at the point of effective decision, and the time span within which such pressure could be applied. The reactions of the nation at large had the heaviest weight in terms of numbers involved, of course. But it was also apparent that most of our citizenry were neither conversant, nor particularly concerned, with agricultural mobilization issues; that they were not effectively organized to exert pressure to change policies; and that their sole means of registering their views on such matters forcefully was through widely spaced elections at which a bagful of issues were inextricably intertwined. The reactions of farmers at large certainly involved greater interest and knowledge; but, except for those acting through effectively organized channels for exerting pressure on such policies, they seemed to be little more capable of influencing decisions than the national electorate. Congressional reactions were not only more immediate and more alert to the finer points of mobilization issues, but gained strong authority from their ability to exercise coercions through legislative, appropriative and investigative powers. On the other hand, Congressmen, too, had many other interests and burdens, and were quite unlikely to exercise their powers on a continuous basis. Organized pressure groups, however, did little else but concentrate on such issues; they knew as much about the strengths and weaknesses of official proposals as the officials themselves; they followed every stage of policy discussion; their reactions were hard-hitting; and they pressed their interests through a knowing choice of the

most effective techniques for applying pressure in particular circumstances.

Moreover, it should be emphasized that the focus of these political pressures, the appointed head of a major agency, was rendered particularly vulnerable to such coercions by the fact that his position usually involved the assumption of political responsibilities far greater than his own political strength or authority. His tenure was uncertain. He was aware of the dangers of too much adverse publicity, of being embroiled in too many public battles, of becoming unpopular with the legislative and appropriations committees dealing with his agency's needs, or of being declared *persona non grata* by the influential organized interest groups affected by his policies. In time of crisis, he could, of course, call for help from the President. But, in view of the President's engulfing burdens, it was obvious that such distress signals could not be hoisted very often. When the prevailing view in the Congress was sympathetic with his proposals, continued resistance from pressure groups could obviously be contained more easily. And when the public at large, or the groups immediately affected, were actively interested and resoundingly favorable to his proposals, the agency director had strong weapons with which to hold off specialized interest groups, and even to engender political pressure on Congress. But, at other times, and mobilization was one such period, the pressure for a considerable degree of accommodation to the more immediate, more continuous, more knowledgeable, and more effectively applied coercions was very difficult to withstand. And so long as the most powerful of such pressures was generated by those stressing the protection of special interests rather than the general interest, it was in that direction that those being borne along by such forces were most likely to drift, however reluctantly.

In contests over agricultural mobilization policy, the two over-riding determinants of the outcome were the push of need and the resistance of personal interest. Focussed on the fulfilment of needs, the technical viewpoint could find justification for proposals which would enhance mobilization achievements even though burdening agriculture; and they could also justify measures involving greater sacrifice in the short-run but promising generous repayment over the years. Political considerations, on the other hand, emphasized minimizing the burdens and maximizing the benefits of those interest groups possessed of greatest political leverage at the level of agency policy decisions, *i.e.*, organized agricultural interest groups. Indeed, unlike the elected official, whose actions could be guided by a strategy of having the benefits outweigh the burdens of his actions

over the entire period between elections instead of on a week-to-week basis, the appointed official seeking to retain the support of politically influential groups had to offer them an almost continuous excess of benefits over burdens.

Both the technical findings relating to needs and policy recommendations and estimates of politically weighted demands had to be given thorough consideration in the development of realistic national policies in a democracy. But, at the point of decision in the individual agency, the balance between these opposing forces seems to have been singularly one-sided. Against the estimates of subordinate technicians was arrayed the enormous influence of large organizations of farmers, powerful business groups, political leaders sympathetic with the objectives of these groups, and potent means of influencing public opinion. Even the personal motivations of most government officials and employees seemed to be more favorable to the political than the technical viewpoint. One factor in determining this preference may have been that personal advancement and security were more likely to be enhanced by supporting the obviously stronger side. Also involved, however, may have been the realization that most governmental operations would show to better advantage when measured against unchanging or relatively modest adjustment goals than against demands for wholesale or far-reaching changes.

Observation suggests that needs outweighed considerations of political expediency in the formulation of basic agricultural mobilization policies under but two sets of conditions: when needs were so urgent that failure to meet them was considered likely to threaten serious military reverses, with consequent political repercussions; and when the President grew so concerned about impending urgencies that he ordered the introduction of needs-oriented measures regardless of their flouting of current political pressures. Both such circumstances were rare, however. The latter was uncommon because the President was so swamped by innumerable responsibilities that he could not follow agricultural developments in great detail. And over-riding pressures on food programs as a result of military crises were infrequent, both because the factors affecting military operations were so numerous that responsibility could not easily be traced back to specific sectors of mobilization undertakings, and also because the major wartime burdens of agriculture did not stem from direct military needs. Technical determinations of needs were also given heavy weighting as compared with political considerations during the early period of the war, the period which was marked by the greatest upsurge in mobilization efforts. But this came at a time when the public

was considered to be so alarmed over the emergency that officials of the Executive, and many Congressmen, too, were inclined to feel that all efforts to meet wartime needs were fully supported by the electorate as well as by most farmers, whatever the resistance offered by a few unregenerate interest groups.

It is of particular significance for national planning, moreover, that the penetration of agricultural mobilization efforts by considerations of political expediency was not limited to the point of interaction among technical, personal and political pressures at the apex of the organization, but became pervasive. Through the operation of the personal motivations which were seen earlier to engender subservience to the managerial hierarchy, the consistently heavy emphasis on political expediency patently reflected in top-level decisions led in turn to an intensified preoccupation with such considerations at successively lower levels in these agencies. Herein lay one of the most direct causes of shortcomings in agricultural mobilization. In time, competent technicians appeared increasingly to be qualifying their expert, objective findings with allowances for political feasibility which were unverifiable and which they were clearly not competent to estimate. Resultant technical proposals were much more susceptible of ready compromise with political pressures, but largely because of the prior inhibition and distortion of the technician's proper responsibilities. Similarly, the downward revision of estimates of need in accordance with political pressures made it possible for agency spokesmen to ask for less far-reaching policies and controls, thus reducing differences with the Congress. And the emphasis on political expediency seemed to percolate down to the action programs as well, leading to less aggressive program execution, greater flexibility in the interpretation of mobilization requirements, and more emphasis on disapproval by farmers or other politically potent interest groups as a sufficient justification for shortcomings in program performance. In due course, the inability to reach even the modest adjustment goals which were established came to be regarded as conclusive evidence not of the inadequacy of prevailing policies and controls, nor of the ineffectiveness of program execution, but of the impracticability of the original objectives, and, hence, of the necessity to further contract established mobilization goals.

The foregoing discussion should not be interpreted to imply the non-existence of civil servants so deviate from our cultural norms that they openly and actively placed adherence to the promotion of social welfare



and to the improvement of the government's research and technical contributions above considerations of personal ambition. Insensitive to the urgencies of political expediency, and unwilling or unable to manifest subservience by suppressing independence of judgment, such employees may well have exerted a disproportionate effect on policies through the sheer impact of hard-hitting, courageous, patently disinterested analysis. But their numbers seem to have been so limited that their influence on major policies is not readily discernible. It should be recognized, moreover, that, however capable of constructive contributions it may be, such non-conformism is seldom encouraged, either in government or in other organizations.

## CHAPTER XIX

### SOME REQUIREMENTS OF MORE EFFECTIVE PLANNING

THE formidable array of shortcomings in agricultural mobilization which have been recounted should not be interpreted as discrediting the practicable potentials of national economic planning. Such inadequacies suggest, rather, the consequences of an abrupt, enforced assumption of the most complex of planning burdens by an economy largely ignorant of, unprepared for, and even hostile to, the requirements of authoritative governmental planning. Whether such centralized planning, with its broad extension of Federal powers, is preferable to unintegrated planning by many large and small enterprises each seeking to promote its own economic interests may well continue to be debated. One may hazard the guess, however, that this debate will prove of decreasing relevance to the practical choices that lie before us: in respect to agriculture and other particular sectors of the economy on a continuing basis; and in respect to the economy at large during periods of mobilization and of severe economic stress. At any rate, so long as the electorate seems disposed to heap increasing planning burdens upon the government, it is clearly desirable that the most energetic efforts be made to increase the efficacy with which such tasks are performed. And in seeking to develop needed improvements, valuable use may be made of analyses of past achievements and shortcomings, such as has been undertaken in the present study.

Obviously, the development of national economic policies requires the resolution of a wide array of conflicting pressures; and ultimate responsibility for such resolution rests inescapably with the Federal government. To the extent that the government serves merely as a passive agent or umpire in the process of resolution, results tend to be determined, of course, by the relative political and economic strength of opposing interests at the point of decision. Under planning, however, with its fundamental commitment to the attainment of pre-defined ends, the government must undertake to exercise whatever degree of leadership and control may be necessary to bring the outcome of such competing pressures into effective alignment with the established objectives of the current plan. The major causes of shortcomings in agricultural mobilization suggested by earlier discussion were: confusion about mobilization needs and objectives; weaknesses in the machinery for executing plans; outright opposition by special interest groups; and widespread ignorance and

apathy on the part of the electorate at large. To overcome such powerful inertias and obstacles seemed to require the exercise of a strong leadership—one not only determined to make the sweeping changes needed to convert the apparatus of government into a more effective instrument for national planning, but also willing to face up to the political risks of challenging the resistance of influential interest groups, of disturbing the lethargy of the electorate, and of pressing for the reconsideration of popular preferences about what should be done in the light of Federal findings about what needed to be done.

But the fundamental problems of leadership in promoting agricultural mobilization were not traceable solely to the need for extending further the governmental planning programs and procedures that had been developed during the 1930's. Hardly less vexing were the difficulties involved in having to effect profound changes in the very technical foundations of planning for war as compared with those which had emerged in peacetime. In respect to basic objectives, most peacetime economic planning, especially in the realm of agriculture, had been concerned primarily neither with changing the product composition of output, nor with changing the allocation of resources, nor even with effecting a general increase in the efficiency with which available resources were being utilized; instead, their essential interest was in raising the incomes of certain disadvantaged groups. Of course, resultant measures did affect somewhat the composition of output and the allocation of resources, but these adjustments were encouraged only insofar as they promoted overriding income objectives. Wartime mobilization, however, required a virtual reversal of such emphases: stressing the need to alter the level and composition of output and, in turn, to change the allocation and efficiency of use of resources; and requiring only such attention to the patterning of income distribution as would prevent its interference with the attainment of these over-riding objectives. In respect to basic methods of effecting proposed adjustments, most peacetime planning was centered primarily not on changing the fundamental role of our price-articulated, profit-motivated economic machinery in determining output, resources allocations and income patterns, but on strengthening the bargaining position of disadvantaged groups within it. During the war, on the other hand, this machinery was itself largely paralyzed through the freezing of prices and costs and by other means, and the guidance of output and resources allocations and income adjustments placed under close governmental control. Even though but inadequately effectuated, these changes in purpose and method were of enormous importance for every stage of

practical planning: changing the locus of needs determination, changing the bases for estimating practicable potentials, changing the character of implementing policies, changing the scale and character of effectuating organizations, and changing the criteria for appraising progress. Even more significant, perhaps, such reorientation required far-reaching adjustments at the very heart of the planning process—in the thinking of those actually doing the planning.

In the resolution of conflicts about planning, the major tools available to leadership included: *research*, to eliminate differences about the facts; *educational efforts*, to minimize disagreements traceable to ignorance of the facts; *judicial analysis*, to evaluate conflicting interpretations as objectively as possible; *negotiation*, to compromise differences within the limits permitted by adherence to pre-defined objectives; *publicity*, to clarify the points at issue and the reasons for disagreement; and *action*, to exercise the authority delegated to it by the electorate, subject, of course, to periodic appraisal by the voters. Used with determination, these offered powerful means for effectuating sound planning within the margins of tolerance set by the electorate's acceptance of basic mobilization objectives. But such tools could also be used to generate unwarranted complacency, to justify inadequacy, and to appease political pressures.

#### I. TOWARDS THE MORE EFFECTIVE ANALYSIS OF NEEDS FOR PLANNING PURPOSES

There is no more influential determinant of the forward thrust of planning than the analysis of needs and of practicable performance potentials which constitute the first stages in the planning process. Such findings help to determine the scale of program goals. They provide the primary bases for assessing the adequacy of resultant achievements. And above all, by identifying and measuring grave needs and by carefully exploring what might be done to alleviate them, such determinations define the potential benefits which alone can excite popular interest in, and support for, planning proposals.

Confusion and disagreement about wartime requirements and agricultural mobilization objectives were due in substantial measure to the lack of sufficiently comprehensive and authoritative estimates of needs and of practicable performance potentials, and also to grave weaknesses in the processes of translating generalized policy aspirations into concrete goals for action. To increase the effectiveness of governmental leadership in promoting needed economic planning, it was necessary not only to

have some kind of estimates of requirements and of feasible attainments, but to have estimates as invulnerable to responsible technical criticism as possible. Progress toward this objective promised to help both in establishing the authoritativeness of government performance in the field of planning and in narrowing the focus of admissible conflicts—at least by shifting disagreements from questions of how much needed to be done and why to issues of how, when, and by whom.

Something of the character and scale of the burdens faced by efforts to strengthen the technical bases of needs determination may be indicated by reviewing briefly the tasks facing wartime planners in this area. The process begins with the definition of certain social objectives and passes by stages to as precise as possible a schedule of the quantity of products of various carefully specified types to be made available at indicated intervals for distribution along recommended lines. Those generalized needs which are to be met through planned production and resources allocations must be translated into specific consumption requirements expressed in measurable units. In order to estimate the scale of program undertakings, standards must be established defining the extent to which needs are to be fulfilled, and estimates must be made both of the level of prevailing deficits and of the numbers of people affected. The specific composition of output requirements can be determined only after appraisal of the relative advantages and disadvantages of alternative products in satisfying the various categories of recognized needs. In turn, the future course of needs can be estimated only after consideration of planned production and distribution trends. Even such a skeletonized summary of the steps involved suggests the complexity and laboriousness of the undertaking—and the consequent temptation to hard-headed political leaders and impatient idealists alike to cut short such “preliminaries”.

At every point in the requirements determination process there was need for more comprehensive, more accurate and more directly pertinent data; for close estimates of the degrees of uncertainty involved and why; for research to explore alternatives objectively and analytically, instead of by reliance on past precedents, or on logic and sheer hunches; and for the explicit definition of the interpretative standards employed in gauging needs, relative advantages, and so on. Despite the mountains of information and research findings accumulated by the government as by-products of past programs and other responsibilities, much additional data-gathering and intensive research was required to meet the highly specialized demands of wartime planning; and every effort to minimize such freshly-oriented research served but to enforce heavier reliance on guides to plan-

ning focussed on the problems and potentials of yesteryear. While the margins of uncertainty attaching to forward estimates of requirements in time of war were bound to be considerable, they certainly were not large enough to vitiate the usefulness of such estimating; nor were they equally significant in all sectors of needs determination. Hence, a frank statement of the scale, locus and causes of such uncertainties might well have served to emphasize the realistic range of probable needs, to dissipate the impression that official estimates were little more than guesses designed to further the bureaucratic pursuit of more funds and more power, to discredit opposing claims that ignored such existing limitations, and even to indicate by what means the reliability of such estimating might be further improved. Moreover, if reasonable skepticism about official estimates of needs were to have been further dissipated, it would also have been necessary to develop greater confidence in the interpretative judgments of planning technicians which formed the superstructure of needs determination. Responsible analysts of government proposals had to know, and appropriate officials should have been able to reveal, the answers to such questions as the following: how adequately had it been found possible to translate the tangle of psychological, physiological and economic needs into measurable terms? what degree of scientific validity attached to the criteria used for defining minimum or optimum requirements? by which measures of cost and of yield had the relative efficacy of alternative products in meeting specified needs been determined? to what extent had technical determinations of need and of product efficiencies been distorted by pressure groups and direct deference to Congressional and public opinion?

It would be absurd, of course, to hold that nothing should have been done to deal with wartime exigencies until all such processes had been fully perfected. But it is also all too easy to underestimate the significance of such shortcomings both for the soundness of actual plans and for governmental efforts to promote support for them. Far from inspiring urgently needed confidence, the patent shakiness of official estimates of need actually strengthened the position of those opposing all-out mobilization measures; it even inhibited the zeal of those who, while favorable to energetic mobilization, were apprehensive about the imposition of unnecessary burdens on the nation and the needless expansion of bureaucratic prerogatives. More rigorous emphasis on the technical soundness of governmentally developed estimates of need would probably have reduced both the number of such estimates emanating from official agencies and the gaps among them, and would also have highlighted the reasons

for such differences as remained. Instead, the marked preference of leading agricultural officials for the more optimistic of available estimates, even to the point of slighting their greater technical deficiencies, could not but encourage continued reliance on hazardous improvisations and intensified efforts by technicians to adjust basic findings in accordance with the indicated views of superior officials.

The determination of wartime agricultural needs also suffered from the absence of effective leadership in correlating the efforts of the various governmental bodies engaged in estimating partially overlapping segments of prospective needs, and in adjudicating disputes among them. Failure to achieve such co-ordination within the Executive establishment constituted one of the major sources of inter-agency conflicts, many of which centered about implementing policies but were actually rooted in disagreements about needs. It might even have strengthened the technical soundness of needs determination by forcing differing conceptions of need, differing interpretations of available data, and different weightings of relevant factors into an organized process of interaction. Indeed, the evidence suggests that invaluable benefits to the agricultural mobilization program might have resulted from more vigorous efforts by Executive leadership to reach out even further and enlist the cooperation of appropriate representatives of the Congress in a thorough and technically sound investigation of prospective wartime requirements. Ostensibly impossible because of the formal separation of Congressional and Executive functions, the urgent need of each body for the most reliable possible information in this area suggests that ingenuity and determination might well have contrived some arrangement leading to a closer alignment of views at least in respect to the character and scale of needs.

In brief, then, the determination of needs, on which the structure of agricultural mobilization planning rested, might have been materially strengthened by greater emphasis on technical soundness, by the effective insulation of such determinations from the coercions of political expediency, and by the more thorough integration of the various such undertakings being conducted by agencies of the Federal government. These shortcomings tended to weaken the leadership of the Executive in promoting its planning proposals with the Congress, with the electorate, and against the opposition of special interest groups.

But it should also be recognized as a practical matter that the very vulnerability of wartime needs determinations, together with the failure to publicize them widely or intensively, also made it easier for officials to justify program retreats when such a course seemed advisable to

them. To responsible officials, carefully buttressed findings of urgent need, well publicized, and devoid of allowances for political expediency, represented both serious obstacles to maneuverability under pressure and uncomfortably high standards for the appraisal of their operating achievements. Thus, the problems of planning leadership included the necessity of safeguarding the determination of needs not only from extra-governmental political coercions, but also from the inhibiting influence likely to be exercised by the officials responsible for the execution of plans.

## 2. TOWARDS THE MORE EFFECTIVE ANALYSIS OF PLANNING POTENTIALS

The shortcomings of leadership seem to have been even more serious in the determination of practicable performance potentials than in the preceding stage of needs determination. The proper compass of this undertaking was the successive estimation of maximum physical, economic and administrative feasibilities by qualified technical experts operating within their particular spheres of competence. The actual results of wartime improvisation, however, suggested a confusing compromise involving the projection of verifiable though not necessarily relevant past trends, ill-informed guesses about the probable behavior of farmers and other groups under stress of wartime pressures, and inappropriate attempts to minimize anticipated attacks from influential pressure groups. Indeed, it will be recalled that the outcome of such efforts bore a closer resemblance to what might have been expected from extending the kinds of control programs that had prevailed in peacetime than to the demonstrable limits of possible performance under the sweeping urgencies of war.

Among the most direct inadequacies of leadership in this stage of planning were the following: first, the failure clearly to set forth as guides to the technical determination of potentials both the urgency of maximizing mobilization achievements rather than agricultural income, and the necessity of shaking loose from excessive reliance on the perspectives provided by past adjustment patterns and trends; second, the failure to prevent an over-concentration on national aggregates—which had little practical relevance either for the actual unit of adjustment (the farmer and his farm) or for the formulation of concrete policies for mobilization at the sub-regional and local levels—and the concomitant failure to intensify the development of integrated patterns of increases and decreases applicable to each major type of farm enterprise; and, third, the failure, in this stage, too, to keep technical determinations from premature interaction with, and subordination to, considerations of political expediency



and bureaucratic self-protection. Such shortcomings were probably due in some measure to the unwillingness of the agricultural mobilization leaders to commit themselves either to so sharp a break with peacetime approaches to planning or to so marked a building up of the coercive power of technical recommendations. They were also due, however, to sheer inexperience, uncertainty, and ignorance.

Unless it is to be conducted by those lacking previous experience, planning is bound to be heavily influenced by the momentum of past conceptions of problems, past measures of advantage and disadvantage, and past standards of performance which live on in the minds of planning officials and technicians. In the case of agricultural mobilization, this meant that the fundamental thinking of those carrying planning responsibilities would tend to be skewed along such channels of peacetime conditioning as seeking to maximize farmer income and security, fearing substantial increases in productive capacity, and stressing the expansion of domestic consumption levels. The grip of such old habits could not be broken merely by issuing commandments specifying what was no longer to be done; it called for the formulation, in addition, of positive guides to the re-ordering of objectives and of the bases for designing and evaluating alternative measures—and the principles of navigation applicable to wartime economic planning were not readily apparent. At the point of practical planning, technicians could be warned not to extrapolate peacetime patterns, that such a course was the surest means of preventing mobilization and hence of jeopardizing the war effort. They could also be told not to evaluate alternatives in terms of relative costs, that the most effective policies for the prosecution of the war were unlikely to be those which were least costly or most profitable. But what was to be used in place of these habitual criteria?

With the scale and character of prospective needs estimated in the preceding stage of planning, the determination of practicable potentials centers on three sets of findings: the relative urgency of needs competing for the same resources; the relative net advantages of alternative means of fulfilling specified needs, or, what comes to the same thing, of alternative allocations of resources; and the optimum extension of any particular category of allocation. To the extent that the government sought to minimize both effective consumer demand and the efforts of producers to maximize net personal returns as determinants of output and of resources allocations, Federal planning agencies needed to devise new means of valuation, expressive of relative contributions to the war effort, in choosing among competing needs, products, and processes. There were

few precedents for such a reasonably objective needs-oriented appraisal of economic policy alternatives. It was obvious that the objective was to maximize needed output per unit of available resources—but how? The principles of economics to which planners looked for theoretical guides to the formulation of sound action programs were overwhelmingly concerned with inter-relationships within a price-articulated, profit-motivated, private business economy; and while these had been of some help prior to the war in planning programs which were largely peripheral to the continued functioning of just such an economy, the extant body of economic theory appeared to be pretty much irrelevant to the practical mobilization issues which were pressing for decision.

The needed new guides to planning the allocation of resources under mobilization conditions had to be built from the ground up: by utilizing whatever fragments of relevant data, techniques and research could be readily unearthed; by attempting to adapt technological concepts of input-output efficiency to take the place of cost-price relationships; by searching for progressively less vulnerable bases for allocation, so as to minimize the role of haphazard compromise in the distribution of resources; and by appraising carefully the factors limiting the wider applicability of expedients which had proved useful in contending with particular wartime problems. Considering the comparative brevity of the period involved, significant headway was made along these lines, especially in the area of agricultural mobilization; and the means which proved helpful in that area may be at least suggestive of the kinds of developments requiring more intensive cultivation in respect to other sectors of the economy.

In seeking to determine the relative urgency of needs competing for the same resources, one of the most useful approaches seemed to be the search for technically sound and generally convincing measures of minimum requirements. These could serve both to establish minimum output goals and to provide a basis for comparing the relative urgency of competing claims. Agricultural mobilization planners were most fortunate in this respect, having available authoritative, scientifically-determined standards of the nutritional intake necessary to maintain health. Admittedly, such standards were not available in respect to many non-agricultural sectors of need. But the great value of such criteria in providing relatively unassailable foundations for the appraisal of conflicting demands on agriculture, at least up to the point of meeting minimum needs, suggests that government leaders would have been well advised to give more active encouragement to the development of similarly objective standards of need in other areas of mobilization, and to require agricultural mobili-

zation planning to be more firmly anchored to such already constructed foundations.

Analysis of the relative efficiency of alternative products in meeting specified needs requires the definition of these needs in terms of measurable attributes, together with as objective a determination as possible of the relative contributions of different products in meeting these needs. Here, too, planners in agriculture were favored over those in other areas of the economy by having available a large body of research findings detailing the nutritional content of a wide array of foodstuffs. As a result, it was readily possible to determine the possible sources of urgently needed nutrients as well as the comparative yield of alternative sources. At the same time, the paucity of such data in other areas of mobilization constituted another serious obstacle to effectively promoting wartime urgencies against the pressures of special interest groups both within and outside of the Federal government.

The central problem faced in efforts to develop measurable and objective criteria for choosing among alternative allocations of given resources, and for choosing among alternative means of supplying needed products, is that of finding measures for evaluating benefits and costs in terms comparable to one another, so that the net advantage of one proposal can be appraised against that offered by others. In view of the substantial disengagement of the structure of price relationships from the strategic direction of the wartime economy, it would have been as misleading to measure costs in terms of the dollar value of expenses as it would have been to measure benefits in terms of the market value of resultant output. Instead, during the war, costs had to be measured in terms of the demands made on various scarce resources, and benefits by prospective contributions to the fulfillment of various categories of recognized needs. It was obvious, however, that, as among discrete major categories of need, there was no technically unassailable basis for comparing the relative desirability of a 5 percent contribution to one category of need with a 10 percent contribution to another. Similarly, as among the discrete resources of production, there was no objective basis for comparing the relative burdensomeness of a 2 percent levy on one category of production resources as over against a 4 percent levy on another. In practical wartime operations, therefore, it was possible to make reasonably accurate determinations of the relative advantages of alternative input-output arrangements only in respect to choices involving the output of closely similar products by differing means employing closely similar combinations of resources. The less similar the products involved and the less

similar the combination of resources demands involved, the less effective were the technical determinations of relative advantage that could be made—for example, in appraising the relative desirability of allocating a given volume of manpower among a wide array of dissimilar purposes. It is noteworthy that agricultural mobilization efforts were distinctively advantaged in dealing with these problems as well, having available reasonably authoritative, if not entirely conclusive and fully detailed, findings of the relative output of various nutrients per unit of major resources required under a variety of farming conditions.

Of course, the broad problems involved in the governmental redirection of output and of resources allocations, which have just been discussed, were of greater significance for the estimation of practicable performance potentials and for the designing of a basic strategy of agricultural mobilization than for the resolution of day-to-day issues. But this circumstance in no wise reduced the importance of such problems; nor did it justify their neglect under the guise of hard-headed practicality. Day-to-day improvisation may be unavoidable but it tends to constitute an obstacle to, rather than an implementation of, planning, unless even the appraisal of immediacies is consistently guided by principles and by criteria of desirability rooted in a cogent strategy for progressing toward pre-determined ends. Lacking such compass orientation and navigational aids, the successive expediencies of the moment may well result in aimless programmatic wandering rather than a consistent movement toward desired goals. Indeed, such improvisation, with its disregard of longer-term perspectives and of more encompassing bases for promoting co-ordination and balance among interacting programs, is very likely to be itself a major source of dislocations, complications and friction.

Thus, major technical shortcomings alone would have made it impossible for the sudden and far-reaching demands on economic planning to be met either fully or efficiently within the comparatively short duration of the emergency. The findings of the present study strongly suggest, however, that much more could have been accomplished in agricultural mobilization even within the limits of available technical resources than was actually achieved; for the extraordinary technical advantages enjoyed by agricultural planners were but indifferently reflected in mobilization performance, in yearly goals, or even in the discernible longer-term conceptions of mobilization strategy. A reasonably strong case could be made for holding inadequate leadership responsible for the failure to push ahead technical frontiers with greater energy and determination;

its responsibility for the failure to fully harness even the technical resources which were available is hardly arguable.

The apparent disinterest of responsible leadership in making the most of rigorously determined maximum performance potentials was also indicated by its failure to press for the extension of such findings to the point of most direct usefulness. So long as such findings were focussed on national aggregates, presumably representing the net resultant of widely variable potentials for different but unspecified parts of the farm plant, little guidance was provided for practical program planning by specific types of farming enterprises and by specific localities. Such an emphasis on national aggregates also minimized attention to the need for inter-regional shifts in resources and output patterns, and avoided the vexing but pressing problems of fitting together proposed national programs relating separately to farm labor, machinery, fertilizers and credit, as well as those concerned with crop and livestock adjustments, into integrated and practicable over-all plans for mobilization action for successively smaller geographical areas. One may conclude that these inadequacies, too, necessarily reduced the effectiveness with which top leadership could promote needed mobilization adjustments in the field and evaluate the progress made. But realism also compels consideration of the possibility that the proliferation of technical standards of what might be done and by what means was discouraged by operating officials desirous of retaining the greatest possible latitude for the exercise of administrative discretion in the face of serious obstacles and resistance.

Before leaving these problems of determining wartime adjustment potentials in agriculture, three other significant shortcomings in the processes employed deserve mention. First, such estimates should have been made not only at the outset of mobilization planning, but periodically throughout its duration, so as to provide a more dynamic setting of long-term perspectives within which shorter-term alternatives could be evaluated. Second, while agricultural agencies could appropriately have determined the most effective potential utilization of whatever resources were made available to agriculture, they were not proper vehicles for determining what proportion of the nation's total resources could most usefully be allocated to agricultural purposes. Hence, there was need for more effectively gearing such determinations for agriculture into a higher level of strategic planning concerned with maximizing mobilization potentials for the economy as a whole. Third, although little has been said here about the bases for estimating administrative feasibility, and although little was in fact done to reduce the catch-as-catch-can quality

of such determinations, the need to displace hunch and the simple extrapolation of past experience was as great in this area of analyzing maximum performance potentials as in others. Measures of administrative effectiveness had to be devised, the factors affecting it determined, and alternative means of improving such performance explored. Moreover, the margin of variability between objectives at the top and performance at the bottom had to be measured, both to prevent the definition of adjustment potentials so small as to fall within the margin of variability of the administrative machinery itself and also to provide guides for efforts to reduce such "play" between the steering wheel and the tires. What was needed, therefore, was an increasingly sound basis for assessing the limits of administrative feasibility, for devising means of extending the range of such limitations, and for differentiating between this source of planning shortcomings and others. One may also repeat, in passing, the need for keeping technical determinations of maximum practicable potentials, too, free from premature interaction with, and subordination to, considerations of political expediency and bureaucratic self-protection.

### 3. TOWARDS THE MORE EFFECTIVE PLANNING OF PROGRAM GOALS

The translation of generalized planning aims into concrete programs for action requires not only the determination of needs and the estimation of maximum practicable adjustment potentials, but also the formulation of annual adjustment goals and of programs to effectuate them. This involves the preparation of technical estimates of how much of the estimated maximum adjustment potentials can be achieved within the coming year and by what means; development of the most authoritative possible estimates of the political costs of successively more far-reaching adjustment efforts within the year ahead; and the definition of a basic plan for the year, representing a working resolution of conflicts between technical and political pressures. In view of the extended discussion already presented of the factors affecting the determination of maximum adjustment potentials for the entire mobilization period, which would largely parallel the considerations involved in making such determinations for shorter periods, attention will be centered on the second and third of these tasks.

The soundness of planning in action depends not only on the soundness of its technical foundations but on the soundness of its political foundations as well. Only at the most abstract level of theorizing, can there be national economic planning which is devoid of political content and consequences. Technical determinations of what might be done and

by what means must be compromised with considerations of political feasibility, if proposed programs are to engender the powerful support needed to overcome the obstacles which commonly stand in the way of changing the patterning of economic advantage. But while the need for increasing the effectiveness and reliability of such technical determinations is becoming widely recognized, and has been already the focus of much though hardly adequate effort, the far more influential determination of the political feasibility of alternative planning proposals remains a process which has never even been adequately delineated. The enormous opening thus provided for the over-ruling of careful technical findings of needs and potentials in favor of judgments based on unverified estimates, personal interests, and narrowly partisan considerations has added little to the attractions of governmental planning as a dominant basis for guiding national economic development.

Determination of the political feasibility of proposed programs involves appraising the probable reactions of important political groups, as well as estimating the costs of pressing for changes beyond the margins of ready tolerance. It is easy to learn what is wanted by the groups most effectively organized to press their views in Washington, the din of their demands seldom fading in the ears of government officials. On the other hand, comparatively little is known usually about prevailing attitudes on specific policy alternatives of the far larger sections of the electorate which lack effectively organized channels for urging their preferences at the point of decision. Not only does this disparity tend to prevent a rounded exploration of the views of our citizenry on important issues, but it tends, by default, to result in undue weight being given to the desires of special interest groups, which are the more likely to favor the preservation and reinforcement of past patterns of allocating economic benefits. Hence, planning which threatens to clash seriously with the interests of these influential groups will all too often seem to be politically unfeasible. To ensure a more rounded appraisal of political feasibility, and thus strengthen the political foundations of planning, the government must contrive means for ensuring the fuller and more continuous representation of the views of the electorate at large on matters of prospective policy.

In addition to such exploration of current preferences, it would also seem to be a necessary responsibility of planning leadership in a democracy to take the offensive in actively drumming up support for what are considered to be needed changes in governmental policies. As a basis for such efforts, officials need to know not only what groups and individuals think about given issues, but also how much they know about them, how

interested they are, how deep-seated current attitudes may be, and what considerations appear to be most influential in molding such opinions. Here, too, some reliance on the intuitive judgments of the politically experienced may be indispensable. And yet the effectiveness of governmental leadership might be increased immeasurably, especially in furthering the major changes implicit in national planning, if the fullest possible use were made of recently developed techniques in the social sciences to strengthen the technical basis for determining both how far the electorate would be prepared to go if given fuller information about needs and means, and also how to stimulate needed interest, understanding and support most fruitfully.

In appraising the prospective political costs of contemplated programs realistically, attention must be given not only to eventual reactions at the polls, but also to more immediate reactions, especially those likely to influence Congressional action. At this important stage in the process of whittling down planning objectives to accord with estimated feasibility, no practicable alternatives have even been suggested to placing overwhelming reliance on the judgments of experienced political negotiators, despite the widespread impression that such individuals are likely to place greater stress on political amity than on maximizing the fulfillment of recognized needs. At the very least, however, it would seem desirable that evaluations truly reflecting such biases be considered merely as competitive with, rather than as superior to, technical determinations of needed change.

Political costs are not necessarily assessed solely against the planning proposals engendering adverse reactions. This suggests the desirability of changing the locus of decisions entailing such burdens. The basic interest of the incumbent leadership of the Executive establishment necessarily centers on the promotion of its political program as a whole, rather than on the furthering of particular segments without regard to the effect of such localized gains on the prospects of advancing the entire front. Hence, the invariably limited political strength of the administration in power must be distributed closely in accordance with its larger purposes. On the other hand, those charged with the execution of a particular program tend ordinarily to develop a monopolizing concern with their own problems and the related protection of their own interests as officials and as individuals. Under these conditions, the deliberate or permissive vesting of officials of a particular agency or program with authority to make political compromises could not but serve to dissipate the administra-



tion's political strength in unco-ordinated attempts to promote particular programs or to placate particular interest groups.

Furthermore, the failure to centralize decisions about the extent and locus of permissible concessions to political pressures tends not only to limit the benefits secured by the administration in return for such dispensations, but also to increase the magnitude of the concessions deemed necessary. Special interest groups can apparently press their demands more effectively at the level of the agencies dealing with their particular problems than at the higher levels of authority where many sectors of the economy are dealt with, and where the competitive pressures of a variety of interest groups may be manipulated to offset one another. While the transference back to a central body of much of the powers of political decision hitherto exercised by the directors of individual agencies may well reduce the attractiveness of such positions to the politically ambitious, it would also help to free the entire administrative apparatus of such agencies from political involvements which have served more to deter than to encourage hard-hitting, efficient planning and execution. Some such measure might also curtail the tendency of politically sensitive or insecure agency officials to become themselves the spokesmen within the Executive establishment for the political pressures to which they are directly subjected. This last practice engenders inter-agency conflicts not attributable to truly divergent interests within the Executive leadership, but which merely reflect conflicts among extra-governmental groups brought into the official family by subservient or dominated officials.

Earlier discussion, based on agricultural mobilization experience, has brought out the need not only for improving the technical foundations of determining needs and performance potentials, but also for more effectively co-ordinating such findings by different governmental agencies in order to ensure a carefully integrated program for the alteration of output patterns and of resources allocations. To this may now be added a parallel need not only to strengthen the technical foundations of determining political reactions to planning proposals and to render them more favorable, but also to centralize determinations of the demands of political expediency and of the concessions to be made to assuage them.

One of the climaxes of practical economic planning comes at the point of making programmatic decisions involving the resolution of conflicts between pressures to maximize the fulfillment of recognizedly urgent needs and pressures to maximize effective political support for the incumbent leadership of the Executive establishment. Among the anxious questions which must then be faced are the following:

What kind of balance should be struck between programs designed to gain the acceptance of the special interest groups capable of exerting greatest political influence during the periods between elections as over against programs designed to win more widespread support among the electorate at large, but a support which finds effective expression only at elections?

What kind of balance should be struck between programs directly burdening all or most of our citizenry in order to secure indirect benefits to the community at large—as in the case of imposing severe food rationing in order to strengthen our capacity to provide post-war aid to devastated areas—as over against programs offering direct benefits to most of the electorate at the cost of burdens diffused over the community at large?

What kind of balance should be struck between programs which minimize burdens or provide attractive returns during the period preceding the next election, although tending to neglect or accentuate basic national problems, as over against programs which offer far greater benefits in the long-run but would be far more burdensome in the time remaining before the next election?

What kind of balance should be struck between seeking to court public favor by deliberately minimizing the number of controls to be instituted, and especially those involving direct restraints on large sectors of the population, as over against seeking to ensure more effective performance by pressing for more widespread and more closely interwoven controls intentionally designed to reach all those capable of significantly influencing the attainment of control purposes?

These are not issues that can be by-passed, for resultant programs necessarily reflect decisions relating to each, whether made consciously or unconsciously. More important for an evaluation of future planning potentials and problems, it is difficult to avoid the conclusion that the choices counseled by considerations of immediate political advantage differ materially from those offering the greatest contributions to the promotion of the national welfare; that the latter will tend to be slighted until the determination of national policies is rendered more responsive to the large sectors of the electorate whose personal interests more nearly approximate those of the common welfare; and, hence, that the onset of increasingly pervasive and coercive national economic planning requires the development of increasingly powerful counter-influences to the pressures of personal political ambition and of effectively organized special interests if planning is to serve the best interests of the nation at large.

Perhaps the two most important sources of pressure to keep governmental planning from lagging too far behind needs and from wandering unduly from its proper emphasis on the common welfare are: first, the

development of increasingly comprehensive and technically unassailable estimates of needs and of physically and economically practicable potentials; and, second, the development on the part of the electorate at large of increasing interest in, and knowledge of, planning issues, as well as of increasing participation in the formulation and execution of resulting programs.

It is certainly no part of the democratic ideal to seek the transference of the strategic direction of national affairs to any group not subject to control by the electorate, not even to those who might qualify as objectively-minded and highly experienced technical experts. But increasingly comprehensive and technically unassailable determination of needs, of performance potentials, of prospective benefits, and of attendant costs and risks can contribute enormously both to increasing the effectiveness of national economic planning and to increasing its responsiveness to the electorate. In promoting better planning, such expert findings as those suggested above can provide sounder guides to the selection of alternatives by elected officials faced with the risks of groping and fumbling in the determination of policies fraught with grave consequences—thereby reducing at least the possibilities of shortcomings or errors attributable to sheer ignorance. Such findings can also serve the wholesome purpose of engendering a fuller appreciation by politically responsible leaders of the complex requirements of planning and, hence, of the need for wide-ranging, and yet closely integrated, programs to cope with them. By these means it may be found possible not only to reduce the costliness and inefficiency of much planning, but also to moderate the tendency of many planning officials to seek to increase program accomplishments by invoking increasingly oppressive controls. One may well argue that at least a part of the coercions associated with past efforts in the field of national economic planning, both in this country and abroad, have been attributable to the efforts of established governments to make ill-considered and inadequately developed plans work through sheer compulsion rather than accept the responsibility for their own failures.

In addition to reducing the range of alternatives within which decisions must be left to the discretion of elected officials operating at the center of a variety of competing pressures, more widely applicable and technically authoritative determinations of needs and potentials can also make possible the exertion of greater leverage at the point of decision by the electorate at large. Wide publication and intensive discussion of such findings would not only develop a far better informed electorate—itsself a major contribution to the effective functioning of democracy—but

would also provide practical standards whereby the voters could appraise the performance of their elected representatives. Possibly even more important, such findings about what could be done to alleviate the painful needs of wide sectors of the population would operate evocatively to galvanize people's interests and energies in promoting large, concrete welfare objectives. Nor is it without significance that such technical findings would enable hard-pressed governmental officials to better appraise the claims of special interest groups, and to more strongly bolster their resistance to such pressures.

It need hardly be added that efforts to strengthen the technical foundations of national economic planning face powerful opposition. Those who are zealously opposed to all governmental planning well realize the dangers of permitting such planning to become increasingly useful and efficient—apparently even preferring the risks of having the nation rely on hastily-contrived, jerry-built planning in times of emergency to the development of sounder but more continuous planning. Special interest groups seem determined to prevent any possible inroads on the maintenance of their disproportionate influence on national policy determinations. Nor do many elected officials, or policy-making civil servants either, give signs of enthusiastically welcoming the development of more effective measures for evaluating their performance. To overcome such obstacles requires great political strength. Its only likely source is the group which stands to gain most from such improvements in planning—the electorate at large.

More effective participation by the electorate in governmental planning is essential not only to the reduction of the relative influence of personal and special interest group pressures on responsible officials, but to the development of sounder technical planning as well. One of the least impressive chapters in the modern history of American democracy is that dealing with the development of means of securing fuller participation by the voters at large in the formulation and even execution of national policies. The need has grown enormously with the progressive extension of governmental powers and programs, and with the need for quickening the pace of policy adjustments to keep our increasingly complex economy in reasonable working balance. The means of keeping the electorate informed about current problems have likewise grown enormously with the advent of powerful mass-communication media. But there has been little if any significant progress in the development of means to enable the electorate,

in turn, to take an increasingly active and creative part in guiding the application of the expanding centralized powers of the state.

Not only have we failed to introduce major supplements to the important but extremely limited participation afforded by elections, but neither has much been done more fully to realize the potentialities even of that lone instrumentality. Nothing has been done to increase the frequency with which the voters can indicate their current climate of opinion through the vehicle of Federal elections. Their crudity as a means of eliciting the policy preferences of the electorate has been faithfully preserved—permitting no clear mandate to be recorded on any issue, but only a preference for some particular candidate, however distasteful the voters may consider various parts of the concatenation of promises, compromises, and evasions representing his platform. Nor has the election machinery been used to enable the voters to provide legislative leaders in the Congress who, having been elected by the nation at large, could be expected to regard all issues with a breadth of viewpoint unlimited by narrow ties to some particular state or locality. Thus, for example, the election of senators-at-large, especially to serve as chairmen of the major committees of the Senate, would provide one reasonably practicable basis for placing nationally chosen representatives in the Congress as well as for eliciting clear mandates from the electorate in respect to the areas of policy formation which constitute the foci of the various committees of the upper house. One cannot easily demonstrate that continuing shortcomings in the usefulness of elections as channels for the effective expression of the desires of the electorate are advantageous either to the functioning of democratic government or to the sound direction of national economic planning.

But the need for greater participation by the electorate in governmental planning goes far beyond an occasional need for the voter's opinion on alternatives under consideration. Sound planning cannot rest entirely on high-powered thinking by experts in Washington. A program of national economic planning must make sense not only at the level of the economy as a whole, but in every part of it. It must make sense not only for the population considered as an aggregate, or for the mythical "average citizen", but for the largest possible number of actual people where they live and as they live. Planning needs to draw increasingly on the aspirations, initiative, ingenuity, enthusiasms, and practical experience of our citizenry if it is to avoid the very real dangers of becoming overly generalized, overly centralized, and overly authoritarian. And for the sake of maximizing achievements, as well as in the interests of strengthening

democracy, such give-and-take between the government and the people should not only be continuous, but should be an integral part of the planning process itself.

Perhaps the most significant exception to the generally bleak picture of progress in the development of increasing popular participation in the actual functioning of government was the work done in this area before the war by the U. S. Department of Agriculture. Convinced of the need for the far-reaching agricultural control programs which were introduced under the New Deal, Henry A. Wallace and M. L. Wilson, then Secretary and Under-Secretary of Agriculture, respectively, were also fearful of their possible threats to the growth of vigorous democracy. As a result, program planners and administrators were under unrelenting pressure to convert these possible instruments of bureaucratic coercion into direct means of increasing grass-roots participation in, and control over, the programs emanating from Washington. The resulting efforts—never yet adequately appraised for the lessons to be learned from them—may well deserve to rank among the most constructive contributions to the strengthening of democratic government in recent decades.

Little more can be done here beyond calling attention to a few of the highly imaginative yet manifestly practical techniques which were developed in order to ensure that the government would listen as well as command, that it would be prepared to follow as well as to lead, and that it would not only take on additional responsibilities and authority but also pass them on. Efforts to stimulate local initiative included, for example, the device employed in the establishment of Soil Conservation Districts of withholding Federal intervention until local farmers had gathered a specified large number of signatures petitioning for an election on the issue of establishing such an authoritative agency for promoting soil conservation, and until subsequent voting registered a substantial plurality for the formation of a District. Another approach to the development of local initiative was that undertaken through the land use planning program of the Bureau of Agricultural Economics, which sought to help interested farmers to join together in analyzing their local land, capital and human resources and their local needs as a basis for proposing appropriate Federal, state and local measures designed to ease urgent local economic and social problems. Illustrative of the means used to help curb undue authoritarianism on the part of the Federal government were the retention of participation in the production control programs on a voluntary basis, and the requirement that compulsory marketing quotas could not be introduced unless approved by an overwhelming majority

of those affected, recorded in a formal referendum. The decentralization of administrative authority and responsibility was promoted through such important innovations as the turning over of the local execution of control programs to committees elected by the farmers themselves; in other cases, by appointing influential local advisory committees to guide local program officials; and, in still other instances, by seeking to promote the attainment of national objectives through stimulating the organization of autonomous local groups (such as animal breeding and farm machinery co-operatives, credit associations, etc.) which could then borrow funds from the Federal government on a business-like basis and also secure needed technical advice and guidance.

Among the means used in efforts to help sensitize planning and administrative officials in Washington to the needs of farmers, in addition to technical field studies and the use of normal organizational channels, were the following: frequent trips by groups of responsible officials not to address mass gatherings but to meet on a frank give-and-take basis with farmers and their elected local officials in small communities all over the country—in order to take criticism as well as to argue, and in order to see problems and achievements at the grass-roots level instead of just reading about them in highly generalized or summary statistical reports; the organization of widespread formal discussion meetings of farmers themselves to discuss local problems in relation to actual and potential Federal programs in the interests both of re-vitalizing the town hall approach to the common discussion of joint problems and of providing Washington officials with more effective insights into the processes of group opinion formation and into the factors affecting it; and the establishment of a special staff of trained social scientists to conduct continuing field surveys among farmers to learn in great detail what problems were troubling farmers most, in what ways existing programs were helping them or hurting them, what their own experiences had been with the administration of such programs, and the ways in which farmers felt that programs could be made more equitable or more helpful. Results of such undertakings were transmitted directly to the heads of the major agricultural programs, to those in charge of planning, and to the Secretary and Under-Secretary of Agriculture, in order to help offset the deficiencies of formal hierarchical channels as a means of uphill communications between farmers at the outermost point of application of established programs and responsible leadership at the top.

Efforts to increase grass-roots participation in actual program planning included the development of a procedure for the production control

programs generally encompassing the following stages: an initial broad blocking out of prospective objectives and means in Washington; submission of these tentative proposals for detailed discussion, criticism and suggested revisions to successively farther reaches of the field organization, often including formal discussion by farmers at county and township levels; the use of these discussion results in the preparation of a detailed program in Washington; and, finally, the submission of these recommendations for final review at state and even county levels before definition of the final program. Another means of increasing the participation in actual program planning of those affected by it was the introduction of formal or informal choices, or zones of discretion, in the application of certain policies at the state and county levels. This permitted established objectives to be promoted by whatever means appeared locally to offer the best prospects of success.

One could hardly contend that the techniques devised in connection with the pre-war agricultural programs would be equally well suited to all other sectors of the economy. Even in agriculture only a substantial beginning was made at developing them. They are, however, certainly suggestive of the general type and range of means which might well repay intensive exploration and experimentation in efforts to strengthen both the technical and political foundations of national economic planning by increasing the participation of the electorate in the formulation and execution of such governmental programs.

#### 4. TOWARDS THE MORE EFFECTIVE EXECUTION OF PLANNED PROGRAMS

Once the plan is made, the responsibility still remains to carry it through in the face of the administrative and political obstacles that continually arise in any extended operation. At this point the claim is frequently made that, while government may be capable of managing a fairly rigid, straight-line process like the postal service, it is by nature unsuited to conducting efficiently the type of complex operations requiring prompt and continuous adjustment to changing economic conditions. The past performance of many government agencies provides ample basis for such doubts. But the essential issue involved is whether government can be converted into a more effective instrumentality for meeting the demands made upon it by the electorate in a democracy. To that end, use must be made of the vast administrative experience accumulated in business, as well as in the government agencies which have advanced most rapidly along these lines. As a starting point, it should be recognized that in government, as in business, effective handling of sharply changed tasks



requires commensurately far-reaching changes in organization, managerial procedures, and, perhaps, in personnel, too.

In this connection, agricultural mobilization experience suggests the need for changes similar to those which have been forced in business management by the growth in the scale and complexity of private enterprises. In the management of increasingly massive production and distribution organizations, there appears to have been a steady march towards centralizing basic decisions, towards tightening the controls whereby conformance is effected, towards integrating more and more closely the functioning of each component within the master plan guiding the undertaking as a whole, towards the objective measurement of performance at all levels for comparison with established standards, and towards the development of incentives capable of stimulating maximum effort in the interests of achieving established objectives. In view of the extended bearing of earlier discussion on these matters, it is hardly necessary to review anew the substantial shortcomings which characterized the management of wartime economic planning in agriculture in each of these respects. Nor is it necessary to review in further detail why the national economic planning responsibilities which have been generated by the increasing centralization of the economy tend, in turn, to force a progressive centralization of the machinery of Federal government. But realism does counsel recognition of some of the obstacles which stand in the way of increasing the effectiveness of governmental program execution.

The lagging of improvements in governmental management behind the pace of administrative progress in industry may be attributed partly to the difficulties involved in devising measures of operating efficiency in government, and partly to the practical effect of conflicts between administrative efficiency and political expediency. Neither in business nor in government can the relative efficiency or desirability of a given undertaking be determined solely by measuring its effect on costs; only after cost effects have been compared with effects on desired returns can such a determination be made. In the rate of net profit on investment, for example, business has a measure of performance which is of critical significance, in addition to being objective, reasonably precise, and capable of determination on a quarterly or even shorter-term basis. Government activities, on the other hand, while permitting a precise accounting of costs, are frequently devoted to ends which cannot be measured adequately in terms of dollar valuations; and this precludes at least the more obvious and easily contrived measures of the relative efficiency or desirability of alternative policies ( or of differing operations ) which meet the tests of

critical significance, objectivity, reasonable precision and of determinability within short periods. And just as the availability of such measures has helped to accelerate the rationalization of industrial management, their absence has played no insignificant role in helping to safeguard the continuation of outmoded arrangements in the management of the Federal government. Lest this consideration be regarded as of little importance, it should be emphasized that the absence of insistent and persistent pressures toward increasing governmental operating efficiency may sharply limit the theoretical potentialities of national economic planning as a means of jumping ahead progress toward higher standards of living through effecting a more efficient allocation and utilization of available resources.

Lacking the stimulus to increasing operational efficiency provided by automatic and objective measures of performance, such as are provided by costs and profits in private business, government may have to develop more intensively the potential contributions toward this end of two alternatives: the regularized appraisal of operations in each agency by a special arm of the government; and the imaginative harnessing of the creative forces of competition and rivalry within the apparatus of government. Undertaken by a special unit of the Executive Offices of the President (such as might be represented by a broadening in focus and an enlargement in size of the Division of Administrative Management of the Bureau of the Budget), or by an appropriate unit responsible to the Comptroller General, periodic audits of management policies, practices and achievements by a staff independent enough not to have to whitewash actual findings would provide an increasing body of knowledge about variations in efficiency and operating methods which might be used as a positive tool for accelerating needed progress in the administration of governmental undertakings. The undeniably powerful impetus to greater effort and ingenuity engendered by competition and rivalry is apparent not only as between private business corporations, but within them as well—and hence is no less applicable within the apparatus of government. Herein lies one of the major hopes for enabling government to cope with the serious burdens of national economic planning, for competition offers not only a means of increasing operating efficiency but a means of stimulating the greater adaptability to change and the greater receptivity to creative thinking without which a bureaucracy grows blind and inert. The tendency of organizational regimentation to smother initiative and experimentation is manifested in large corporations no less than in government. But its effects are far more serious in the case of the

latter, both because government lacks the offsetting pressures toward managerial improvement which have been noted as operative in business, and because shortcomings in government performance threaten far graver burdens to the nation than comparable inadequacies in any private corporation. Hence, the urgent necessity for government not only to appraise the limits within which, and the techniques by means of which, intra-organizational competition has been found to serve constructive ends in business, but to intensify the exploration of these potentials.

Sight is all too often lost of the fact that program execution is an active tool of policy formation. Pressures for political expediency that have been fought off in the formal definition of operating policies tend but to reassert themselves at each succeeding level of execution, seeking to halt, delay, divert, modify, confuse, or otherwise render as ineffective as possible whatever programs could not be defeated in preceding stages of development. Here is an obstacle to effective administration far overshadowing any parallel in industry. Considered together with the vastly greater scope of most governmental programs than those undertaken by private companies, this probably represents an unprecedented challenge to the development of more effective management controls—a challenge affecting not only the cost of government, but the very prospects of enabling democratic government to cope with the increasing burdens being forced upon it by the electorate.

Some writers have implied the existence of a choice between economic centralization and decentralization, and, having identified the former with an insatiable governmental appetite for power and the latter with the past beneficences of unregulated private enterprise, have called for progressively reducing the role of government in the direction of national economic policies. The thesis is not convincing, either logically or in terms of historical experience. As Veblen and others have made clear, the increasing centripetal pressures of modern economic life are, above all, the product of advancing industrialization, with its irresistible offering of higher standards of living in return for greater specialization combined with growing interdependence. Such centralization is already far advanced and is still moving forward. The resulting centralized powers of decision must be exercised either by an increasingly centralized business group or by an increasingly centralized government, or be divided between them. Under such conditions, to bar the government from participating in the strategic control of the economy would be tantamount to denying the electorate its political right to guide economic policies along whatever lines it might conceive to be in the best interests of the community at

large. Those who are devoted to the preservation of a vigorous democracy have ample reason to distrust such proposals.

In practical terms, the basic issues of national economic planning center around the questions of planning for what purposes, by whom and how well. Planning for the most humanitarian of ends, by those with the best of intentions, but done ineptly, is more likely to result in chaos and hardship than in greater well-being. Undertaken by an oligarchic group seeking to promote its own interests at the expense of the rest of the community, planning is an instrument of oppression to be fought off with the utmost vigor, however great its technical efficiency. Nor would there be much cause for gratification in having planning efforts by a responsible democratic government concentrate on the development of improved data and techniques, unless accompanied by an even heavier emphasis on clarifying its guiding social objectives and on winning the active political support of the electorate for them. In its present state of development in the United States, governmental planning would appear to be neither useless nor a cure-all, neither harmless nor dangerous, although containing elements of each. Indeed, what passes for planning is too diffuse in objective, too vague in principle, too diverse in method, and too variable in results to permit generalized evaluation. But one fact stands clear—the focus of the continuing storm of controversy in this area of national policy is only ostensibly concerned with the desirability of governmental planning itself, its real focus is the desirability of devoting such planning to the acceleration of social change.

From the analysis of agricultural mobilization experiences, one may learn not only that national economic planning is indispensable under such conditions of grave emergency, but also something of the means whereby it might be developed so as to more effectively cope with the mounting burdens being placed upon it by our citizenry. However, one may learn, too, something of the serious effects upon planning in action of confusion in purpose, of inefficiency in performance, and of the subordination of the national interest to considerations of personal and political expediency.

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